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Introduction

This is the fourth annual report produced by the National Applied Resource Sciences Center (NARSC). It takes on a different look this year to reflect what our customers have said that they are interested in. During Fiscal Year 1999, the staff of NARSC completed 297 projects for customers in all States, Headquarters Offices, and National Centers. The report focuses on accomplishments rather than statistics. We have included a list of projects completed for each State/Office and narratives of selected projects completed. This is included to give the reader a better idea of the type of projects/services completed by NARSC during the past year. We hope these narratives will provide the reader with a better understanding of the type of capability that is here. We have also included a list of completed projects arranged by the benefiting subactivity. This is included so that the reader can identify the work NARSC does with programs that they are familiar with.

Fiscal Year 2000 will bring new challenges and direction to NARSC. Over the past several months, several studies of NARSC have been completed. Taken in combination, they point to some fine tuning of the mission of NARSC. The studies have indicated that we should focus some of our talent on providing applications of new science and technologies to meet the challenges faced by the field. The studies also indicated that we should do more in the area of providing information regarding the results of ongoing or completed research in a synthesized fashion that is easy for the end user to apply. These recommendations are always welcomed because it allows us to keep an appropriate perspective and focus on the services and products we offer to our many customers.

In the months to come, NARSC staff will be giving some additional focus to those recommendations and others that we receive during the year. We will strive to bring to our customers new applications of existing technologies and new technologies that will have immediate application in the field. We will also concentrate on producing more Resource Notes, technical reports, and sharing results of current research. In the area of GIS applications, we will focus more on providing application of the technology and less on project support.

While change is inevitable, our committment of providing quality products on time and within budget will continue. The progress we have made as an organization over the past 4 years has positioned us to go forward in new directions with the confidence to know that our value is significant and something that is necessary for the field and Headquarters to be successful.

I hope all readers will look forward to the additional products and services that we will be offering in Fiscal Year 2000 and beyond. As always, we welcome your comments and feedback on this annual report and any recommendations to improve on it in the future.

Lee Barkow

Director,
National Applied Resource
Sciences Center

FY 99 Customer Support

The National Applied Resource Sciences Center (NARSC) is an organization committed to helping Bureau of Land Management (BLM) employees accomplish the BLM's mission. NARSC fulfills its organizational commitment through the delivery of requested products and services. Development and delivery of products and services are accomplished through projects which are the primary means NARSC uses to communicate with customers, manage costs, execute budgets, account for work, and deliver requested products and services to our customers.

In FY 99, NARSC provided requested products and services through the completion of 297 projects. This number represents all assistance provided by NARSC that required more than 40 hours of labor and/or operational funds. The following section lists the NARSC projects completed in FY 99 for each State Office, Center, and the Washington Office. Also provided is the estimated hours needed by NARSC staff to complete each project, the NARSC operations funds (does not include operations funds provided by the customer) required to produce the requested deliverables, and the customer satisfaction rating as of October 1, 1999. In addition, brief descriptions of some of the more significant projects completed for customers are included.

Alaska

- Number of Projects Completed: 5
- Estimated NARSC Hours for Projects: 1,964
- NARSC Operations Costs for Projects: . .$18,856

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NSAK033	CASHE Assessment - Northern District Office	FLORA	020	120	$14,428	NR
NSAK035	North Alaska HAZMAT Site GPS/GIS Mapping	FLORA	020	560	$0	HIGH
NSAK039	Red Top Mine Potentially Responsible Party (PRP) Case - FY 99 Phase	ALLEN	910	120	$0	NR
NSAK036	Stream Dynamics and Channel Design Workshop	STERIN	930	932	$0	HIGH
AEAK014	Mayflower Island Utility System Plans and Specifications	BAER	933	232	$4,428	HIGH

The following are brief descriptions of some of the projects completed for Alaska in FY 99:

Project No.:	AEAK014
Project Name:	Mayflower Island Utility System Plans and Specifications
Office:	AK933

The Juneau Minerals Office is located on Mayflower Island, in the Gastineau Channel of the Pacific Ocean, connected to the North American mainland by a narrow causeway. The facilities on the island had been served by an old, corroding, inadequately-sized water line and two separate onsite wastewater systems, one of which was discharging untreated sewage into the channel and the other was minimally functional due to its age and condition. This project consisted of preparation of plans and specifications for development of new water and sewer utility connections to the City and Borough of Juneau Systems through the causeway. Features of the design included a small sewage pump station, a dosing siphon, and use of double-walled, preinsulated, heat traced "arctic" pipe in exposed locations. Contracting was done in two phases, the first consisting of elimination of the untreated discharge by constructing the pump station to divert all flows to the still-functional treatment unit and the second to construct the actual lines through the causeway.

Project No.:	NSAK033
Project Name:	CASHE Visit - Northern Field Office
Office:	AK020

The Northern Field Office (NFO) facilities from the Canadian

border to Nome and from above the Arctic Circle to Fairbanks were evaluated during a Compliance Assessment - Safety, Health, and the Environment (CASHE) visit conducted over a 2-week period in August 1998. The CASHE Report identified three key areas: need for procedures related to the collecting, recycling, and potentially disposing of off-specification fuels and excess hazardous materials at remote field sites, clean up of old dumps at Abandoned Mine Land and other remote sites, and inadequate sampling of drinking water at a field office and recreation sites. NFO personnel reported that the majority of the findings were completed or in the process of being completed by the end of FY 99.

Project No.:	NSAK039
Project Name:	Red Top Mine Potentially Responsible Party (PRP) Case -FY 99 Phase
Office:	AK910

The Red Top Mercury Mine was active from 1952 until 1955. The mineral cinnabar was mined from Marsh Mountain, transported down slope to the Wood River, and retorted to extract pure mercury. The Red Top retort was partially remediated by excavation in September 1994. Remaining on site since then were 180 one-cubic yard boxes filled with mercury contaminated soils excavated from the mercury retort area. These boxes were deteriorating due to flood conditions in the area. In 1997, the state of Alaska served BLM with a Notice of Violation, but it wasn't until May 1998 that they declared the area an immediate threat to human health and the environment. In June 1998, the state served notice to BLM of its intent to sue. In August 1998, BLM began to remove the boxes and send them to Canada for disposal. After consultation with the State Director and the project manager, NARSC provided both a draft and final Baseline PRP Report. Based on our analysis of the PRP report, we identified possible viable PRPs and drafted CERCLA 104(e) Information Letters. The purpose of these letters is to elicit more detailed information about activities individuals may have conducted at the site. These letters were reviewed by the Solicitor's Office and sent to the PRPs. The estate of one of the PRPs did contribute assistance in the cleanup but did not provide funds. NARSC also facilitated in the successful negotiations with the EPA, DOJ, state of Alaska, Regional Solicitor's Office, and BLM AKSO to resolve the intent to sue by the state of Alaska.

Arizona

- Number of Projects Completed: 14
- Estimated NARSC Hours for Projects: 3,640
- NARSC Operations Cost for Projects: $9,731

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
AEAZ013	Virgin River Campground Water System Improvements	STONE	010	96	$0	NR
GSAZ017	Arizona Strip Ortho-Photo Production	MOORE	010	160	$269	NR
GSAZ023	Arizona Strip - Visitor Map	MOORE	010	390	$0	NR
NSAZ034	CASHE Visit - Arizona Strip Field Office	SMITH	010	120	$8,761	NR
GSAZ015	Lake Pleasant Road Updates of Designated Areas	GIBSON	020	920	$0	NR
GSAZ022	Garfias Mountain Road Updates	GIBSON	020	200	$0	HIGH
GSAZ026	Arizona Route Inventories - Estimates for Photogrammatic Collection of Routes	GIBSON	020	42	$0	HIGH
NSAZ040	Cienega Creek Restoration	SIMMS	046	160	$0	HIGH
GSAZ021	Lake Havasu Site Maps for Deferred Maintenance	DEBOCK	050	440	$48	HIGH
GSAZ018	Empire-Cienega Route Inventory	FORTUN	060	812	$228	NR
AEAZ011	ASARCO Tailings Dam Seismic Review	HOM	910	40	$0	HIGH
NSAZ043	Travasci Marsh Contaminants Review	CHENIAE	917	40	$0	HIGH
NSAZ041	Golden Green Placer Sampling Assistance	TALBOT	930	50	$426	NR
GSAZ020	Mexico-US T&E Pupfish Project	WILSON	953	170	$0	HIGH

The following are brief descriptions of some of the projects completed for Arizona in FY 99:

Project No.:	AEAZ013
Project Name:	Virgin River Campground Water System Improvements
Office:	AZ010

The Virgin River Campground is comprised of 115 campsites served by a utility center and three flush toilet comfort stations, with a single campground host. Water for these facilities is provided by a well, which along with a utility center, caretakers residence, and large rest area (Cedar Pocket Rest Area) had been constructed along Interstate 15 by the Arizona Department of Transportation (ADOT). In 1992, ADOT closed the rest area, which included ramadas, flush toilet buildings, and an RV dump station. BLM has since taken over use of some of the rest area facilities for administrative purposes. The project essentially consisted of recommending improvements and rehabilitation measures for the water system infrastructure to alleviate problems which had been caused by the highly mineralized groundwater over 25 years of use and to prepare plans and specifications to contract for this work. Specific measures included cleaning and disinfection of four large (10,000- to 40,000-gallon) steel storage tanks, replacement of pumps, hydropneumatic pressure tanks, valves and metallic piping, installation of polyphosphate feed equipment for chemical stabilization of the water, reverse osmosis treatment devices for potable (water fountain) services, and extension of utilities to develop a second campground host site.

Project No.:	GSAZ015
Project Name:	Lake Pleasant Road Updates of Designated Areas
Office:	AZ020

NARSC completed a route inventory for the Phoenix Field Office using photogrammetric techniques combined with digital spatial data. The project identified and mapped roads, highways, trails, rail lines, air strips, foot paths, and any other transportation feature in a 1,300-square-mile area that surrounded the Lake Pleasant Regional Park. NARSC used USGS National Aerial Photography Program (NAPP) photography, which had been taken in 1997 and was available at a very reasonable cost. USGS Digital Raster Graphic (DRG) quadrangles were combined with the photography to provide the requested spatial accuracies. The photographs were mounted on a Zeiss P3 analytical stereoplotter. Photogrammetrists then compiled the transportation data directly into a digital file. These files were then E-Mailed to the Field Office where they became a part of the AZ-020 Geographic Information System (GIS). Select areas were also mapped using 1992 NAPP photographs to show changes in the transportation network over time.

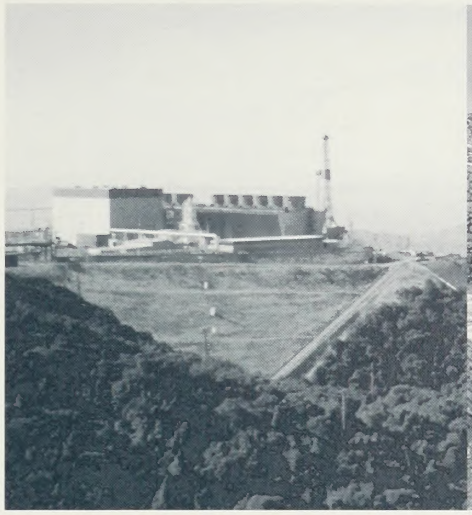
Project No.:	GSAZ020
Project Name:	U.S. -Mexico T&E Pupfish Project
Office:	AZ953

BLM in Arizona, along with other federal agencies, is working in cooperation with the Mexican Federal Government and the Mexican State of Sonora Government to create updated digital maps along the U.S.-Mexico border in an international effort to study and protect the T&E Pupfish as well the Sonoran Pronghorn that inhabit this geographic area. No intermediate scale maps in digital format exist in this area. NARSC was tasked by the BLM Arizona State Office to create geo-referenced digital raster graphic files of the 1:50,000 scale Mexican Government

maps, as well as the USGS counterpart 1:250,000 scale maps. A high resolution color scanner was used to create the digital images using customized look-up tables, and ArcInfo was used to geo-reference the tiff format images. A total of 38 maps were scanned and geo-referenced using a customized Arc "AML" program and delivered to the BLM Arizona State Office where they were merged into a seamless database for application to these two projects, as well as future projects along the international border.

California

- Number of Projects Completed: 7
- Estimated NARSC Hours for Project: 2,468
- NARSC Operations Costs for Projects: . . .$2,144



Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
AECA012	Salt Wells Fire Facility	GRAHAM	060	120	$0	NR
NSCA058	Harper Dry Lake Wetland Water Needs	EGAN	068	40	$801	NR
NSCA054	Molycorp Cleanup Financial Tracking System and Expenditure Report	BRADY	069	244	$0	NR
ICCA004	Stop the Spread of Noxious Weeds Flyer	DEARING	912	40	$0	NR
NSCA019	Iron Mountain Mine Natural Resource Damage Assessment	FORESTER	931	128	$0	NR
NSCA055	CASHE Visit - Bakersfield District	FORESTER	931	120	$1,343	NR
GSCA010	California 100K Mapping (FY 98)	MING	942	1,776	$0	NR

The following are brief descriptions of some of the projects completed for California in FY 99:

Project No.:	AECA012
Project Name:	Salt Wells Fire Facility
Office:	CA060

The Salt Wells Fire Facility consists of "a Day Use Building and an Engine Garage" located in a high seismic zone. The Day Use building has a Ready Room, Kitchen/Dining room, two bedrooms, two accessible bathrooms, a laundry room, a mechanical room, and a telephone closet. The Engine Garage has garage space for fire engines, a shop, office space, a bathroom, an exercise area, and a mezzanine for storage. The client provided the layout, specifications, and all drafting. NARSC provided all electrical engineering support and structural engineering design, drawings modification, and specification review and modification for these buildings to assure compliance with the National Electrical Code and the Uniform Building Code. Special bracing in each wall was required, and the roof and walls were tied together to form a diaphragm. This allows the

building to act as a unit and counteracts the effects of an earthquake. NARSC and the client worked together as a team to provide a quality product for fire fighting operations in the future.

Project No.:	NSCA019
Project Name:	Iron Mountain Mine NRDAR
Office:	CA931

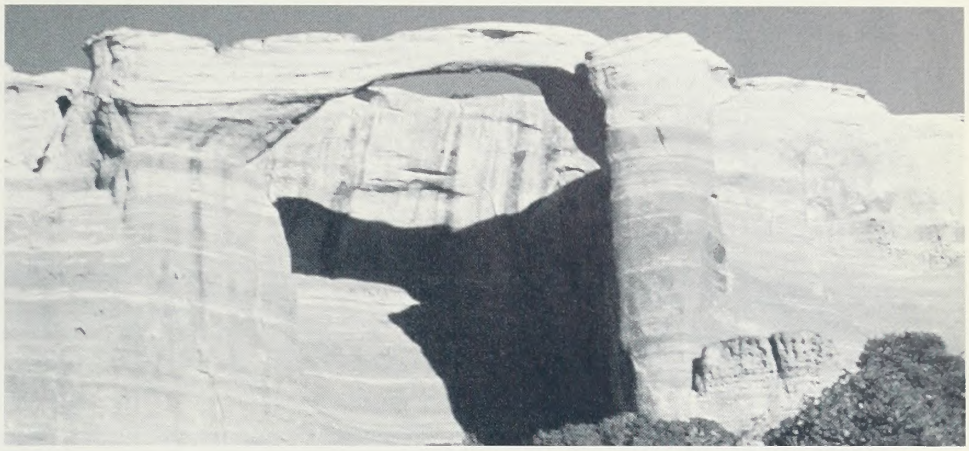
NARSC has been representing the California State Office and Redding Field Office in the conduct of natural resource damage assessment activities regarding this mine site near Redding. These efforts have included the design and implementation of studies of injuries to BLM-managed resources and representation of BLM interests in trustee work planning and preparations for settlement. Iron Mountain Mine is an EPA National Priorities List site, where historic mining activities continue to cause releases of extremely acidic mine drainage and toxic metals pollution. This has affected the watershed of several creeks that drain into the Sacramento River, California's most important fishery for endangered anadromous salmon, as well as ecological health and recreation uses on 4,500 acres of public lands around the mine. Negotiations have been ongoing with the responsible party to address all environmental concerns in a global settlement. The natural resource trustees, including the state of California, the National Oceanographic and Atmospheric Administration, and the Department of the Interior, have been working with EPA to secure perpetual water treatment and other cleanups and to restore the public's resources. The Redding Field Office, along with the other trustees and EPA, is hopeful that the settlement will result in the necessary cleanups and ultimately the restoration of salmon fisheries. Regarding BLM resources, the settlement will include the restoration of streams and riparian zones and recreational enhancements, consistent with a recreation use plan recently written for the region.

Project No.:	NSCA054
Project Name:	Molycorp Cleanup Financial Tracking System and Expenditure Report
Office:	CA069

Molycorp is a mining company with operations under the jurisdiction of the Needles Field Office. The company operates a pipeline that failed resulting in releases of waste on BLM-administered lands. The company has agreed to provide funding to BLM for the costs of overseeing and directing its assessment and removal of the released waste. The BLM is responsible to provide the company with a complete accounting of all expenditures associated with the agency's activities at the site. NARSC developed the methods and trained field personnel to extract the expenditures associated with the site from the BLM financial management system. This information is used to bill the company for agency expenditures. NARSC also assisted in the negotiations with the company for reimbursement of past expenditures associated with the releases.

Colorado

- Number of Projects Completed: 24
- Estimated NARSC Hours for Projects: 4,395
- NARSC Operations Costs for Projects: . . .$4,381



Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
AECO009	Gunnison Resource Area Office - Interior Design	TOLLEFSON	036	326	$1,179	NR
AECO011	BLM/USFS Public Lands Center - Interior Design	JOYNER	038	128	$467	NR
NSCO040	Henrietta Mine Potentially Responsible Party (PRP) Case	ODELL	038	80	$0	NR
NSCO049	Forest Queen Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	038	120	$0	NR
NSCO050	Joe and John Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	038	120	$0	NR
NSCO051	Lark Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	038	120	$0	NR
NSCO052	May Day Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	038	120	$0	NR
NSCO056	Abandoned Mine Land (AML) Training for the San Juan Field Office	ODELL	038	40	$0	NR
NSCO057	Bendora Mine Potentially Responsible Party (PRP) Search	ODELL	038	40	$0	NR
NSCO058	Brooklyn Mine Potentially Responsible Party (PRP) Search	ODELL	038	40	$0	NR
NSCO060	Bonner Mine Potentially Responsible Party (PRP) Search	ODELL	038	40	$0	NR

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
GSCO029	Colorado Interagency Vegetation Classification - FY 99	CAROCHI	052	670	$1,116	NR
GSCO025	Acquisition of Aerial Photography of Prospect Gulch	PETERSON	070	80	$0	NR
NSCO044	Glenwood Springs Natural Gas Environmental Impact Statement (EIS)	MOORE	078	120	$0	NR
ICCO012	Environmental Education for Schools	MALINOWSKI	930	109	$0	NR
NSCO047	Oversite of the Content of the Air Quality Section of the Southern Ute Tribe Oil and Gas EIS (Continuation)	RHETT	931	32	$0	HIGH
NSCO043	Anvil Points Oil Shale Site Environmental Assessment	LANCE	932	70	$39	NR
NSCO046	BLM Representative to Colorado Interagency Air Resource Management Groups (WATF, AQCC, etc.)	DAVIS	932	40	$0	NR
NSCO064	Animas River Geophysical Review	ROBINSON	933	40	$0	HIGH
NSCO068	Waterpower and Reservoir Resources (WRR) Operational Assistance - Power Site Reserve (PSR) 92 - Arkansas River	CHELIUS	935	116	$0	NR
AECO010	Anasazi Heritage Center Deferred Maintenance Condition Assessment	COX	952	339	$1,581	HIGH
GSCO020	Colorado 100K Mapping (FY 98)	SHAUER	954	661	$0	NR
GSCO026	Geodesy/GPS Technical Support	NAGY	956	560	$0	HIGH
ICCO011	Fire Prevention and Education Needs Analysis for BLM Colorado	ALFORD	957	264	$0	NR

The following are brief descriptions of some of the projects completed for Colorado in FY 99:

Project No.:	GSCO029
Project Name:	Colorado Interagency Vegetation Classification -FY 99
Office:	CO050

Under this multi-year, multi-agency project, a statewide vegetation data layer is being developed. The vegetation classification is a modified Anderson's raster data set clipped to the 8-digit, 1:2 million Hydrologic Units or watershed basins. The data is derived from spring and fall Landsat5 satellite, Thematic Mapper sensor scenes at 25-meter resolution combined with extensive field data. Delivered products include the TM data, the classified images, metadata, and the database of field points. To date, twenty watersheds have been delivered. For an example

of how this data is used, see http://www-a.blm.gov/gis/narsc/patches.html.

Project No.:	NSCO040
Project Name:	Henrietta Mine Potentially Responsible Party (PRP) Case
Office:	CO038

The Henrietta site is an inactive mine located partially on BLM lands in Prospect Gulch in San Juan County, Colorado. The mine is suspected of contributing a substantial loading of heavy metals to Cement Creek which flows into the Animas River. The site is in a watershed that is being considered for Superfund by the EPA. After a site visit and consultation with the project manager, NARSC provided both a draft and final Baseline PRP Report. Based on our analysis of the PRP report, we identified possible viable PRPs and drafted CERCLA 104(e) Information Letters. The purpose of these letters is to elicit more detailed information about activities individuals may have conducted at the site. These letters were reviewed by the Solicitor's Office and are to be sent to the appropriate parties. With the information we receive in response to these letters, BLM will be in a position to make a decision whether to seek cost recovery for any work that has been done (or will be done) by the BLM at this site.

Project No.:	NSCO064
Project Name:	Animas River Geophysical Review
Office:	CO933

The Animas River Watershed contains numerous abandoned mines that contribute heavy metal contamination to both surface water and ground water in the region. To assist in the characterization of these mines, the Department of Energy (DOE) performed a geophysical survey to characterize the fractures controlling the ground water flow. A report was prepared to summarize the NARSC review of the geophysical methods applied to this fracture-flow study. Though the findings of the geophysical survey were promising, more work is necessary before the specific survey objectives can be achieved.

Project No.:	NSCO068
Project Name:	Waterpower and Reservoir Resources (WRR) Operational Assistance -Power Site Reserve (PSR) 92 - Arkansas River
Office:	CO935

The Canon City Field Office is pursuing a land exchange in which the proponent would acquire land that is withdrawn in Power Site Reserve No. 92 created by Executive Orders of December 30, 1909, and July 2, 1910. The proponent is willing to accept patent to the land with restrictions that are provided by Section 24 of the Federal Power Act. NARSC prepared a Waterpower and Reservoir Resources Report which describes undeveloped hydroelectric potential of the lands, the options for action, and the BLM recommendation. This project was a cooperative effort which included considerable help from existing expertise at the Colorado State Office. In this case, NARSC also furnished a geologist to investigate and produce a geologic report on the potential reservoir site. Based on the findings of the geologic investigation, BLM recommended the outright revocation of the PSR on these lands. The proponent will be able to receive clear title if the land exchange is completed.

Eastern States

- Number of Projects Completed: 3
- Estimated NARSC Hours for Projects: 586
- NARSC Operations Costs for Projects: . . .$1,671

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
AEES002	ESO Space Analysis and Reduction	FOX		220	$926	NR
AEES001	Milwaukee District Office Space Reduction	DRYDEN	990	326	$0	NR
NSES001	Oil and Gas Contamination of Water Wells	SAARELA	030	40	$745	HIGH

Idaho

- Number of Projects Completed: 12
- Estimated NARSC Hours for Projects: 5,854
- NARSC Operations Costs for Projects: . .$24,207

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NSID035	Risk Assessment for Black Pine Mine	SHILLING	020	200	$0	HIGH
GSID032	Updating the Boaters Guide for the South Fork of the Snake River - Southeastern Idaho	RICE	035	750	$0	HIGH
NSID045	Snake River Basin Adjudication Support (Continuation)	BRUNNER	930	120	$1,549	NR
NSID046	Soil Quality Assistance for Rangeland Health Assessment Training	PELLANT	931	72	$165	NR
AEID014	Conceptual Site Plan for Dike Recreation Area	STEVENS	956	340	$1,001	NR
AEID016	Design for Construction of Blackwell Island Recreation Site	STEVENS	956	288	$14,905	NR
AEID019	China Creek Bridge Design	STEVENS	956	560	$0	NR
AEID023	Revise Standard Fire Station Drawings and Provide Structural Plans and Specifications for Constructing the Soda Springs Fire Station	STEVENS	956	320	$0	NR
AEID024	Deferred Maintenance Condition Assessments at Boise, Burley, and Cottonwood Sites	STEVENS	956	707	$6,588	NR
GSID030	Idaho 100K Mapping (FY 98)	BUNCH	956	1,253	$0	NR
GSID033	Riparian Boundary Investigation - Snake River/ American Falls - Phase 2	SMIROV	957	328	$0	NR
GSID035	Idaho Communication Sites Topographic Maps	CRAIG	957	916	$0	HIGH

The following are brief descriptions of some of the projects completed for Idaho in FY 99:

Project No.:	AEID016
Project Name:	Design for Construction of Blackwell Island Recreation Site
Office:	ID956

BLM acquired Blackwell Island through a land exchange for the specific purpose of developing it as a Recreation Site, primarily to serve boaters using Lake Coeur d'Alene. This project consisted of preparation of plans and specifications for complete development of the site. The program of improvements includes an access road intersecting with U.S. Highway 95 (which required new acceleration and deceleration lanes), a large parking area with landscaped islands, a four-lane boat launch ramp, a fully accessible boardwalk trail with three separate viewing decks, fourteen individual picnic units plus a large group shelter, flush toilets, two boat waste dump stations, and all utilities including water, power, sewer, site lighting, and irrigation.

Project No.:	AEID024
Project Name:	Deferred Maintenance Condition Assessments at Boise, Burley and Cottonwood Sites
Office:	ID956

NARSC performed condition assessments on the sites and their buildings and prepared construction cost estimates for the work required to correct the deferred maintenance discovered during the assessments. The assessments were performed to determine possible architectural, structural, mechanical, and electrical deficiencies and certain building code, health/safety, and accessibility concerns. Seven sites were visited, including the Pocatello Tanker Base, the Boise Horse Corrals, the Hammett Guard Station, and the Bruneau Guard Station, and 24 buildings were inspected.

Project No.:	GSID032
Project Name:	Updating the Boaters Guide for the South Fork of the Snake River - Southeastern Idaho
Office:	ID035

Due to severe flooding on the Snake River between Palisades Dam and Idaho Falls, Idaho, the Boaters Guide published by BLM needed to be updated. NARSC assisted the Idaho Falls Field Office with the project to determine changes in the river and update the Boaters Guide. NARSC used current aerial photography to compile maps and produce ARC/INFO coverages of nearly 100 miles of the Snake and Henrys Fork Rivers. The maps reflect movement in the main channel of the river as well as any new or changed obstructions such as sand bars and the location of rocks and snags. In addition, the maps contain selected cultural features such as roads and bridges, boat ramps and campgrounds, dams, canals and levees, utility lines, fences, and prominent buildings. These features can be used to find your location on the river as well as help orient the maps to the existing maps in the Boaters Guide.

Project No.:	GSID035
Project Name:	Idaho Communication Sites Topographic Maps
Office:	ID957

NARSC's assistance was requested by the Idaho State Office (ISO) to aide in a pilot project that was concerned with communication site inventory and development. NARSC's portion of the project was to produce a series of topographic maps. The mapping was completed in the Photogrammetry Laboratory at NARSC. The five areas that needed to be mapped were: Squaw Butte, East Butte, Howards Mountain North and South, and the Cotterrel Mountains. It was requested that all five sites be mapped using a 1-foot contour interval around

existing facilities and a 5-foot contour interval in areas that had "potential" for development. The maps also needed to show an in-depth inventory of improvements that have been made at the sites. Examples of this type of information would be roads, buildings, radio antennas foot prints, and heights, etc. With these guidelines, a flight line was designed to obtain aerial photography (1:3000 scale) that would enable compilation of maps meeting these criteria. The necessary survey information was supplied by ISO. The maps were compiled using an analytical stereoplotter. Hard copy plots of the maps, at a scale of 1 inch = 40 feet, were supplied to ISO accompanied by digital files. Access to the digital files will allow ISO to maintain and customize the maps where required. The maps produced by NARSC will be used as base maps for Communication Site Plans. These base maps will ultimately be altered to reflect planning decisions. Realty specialists and telecommunications specialists will use the maps in the site planning process.

Montana

- Number of Projects Completed: 11
- Estimated NARSC Hours for Projects: 7,063
- NARSC Operations Costs for Projects: . .$23,462

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NSMT025	CASHE Visit - Lewistown District	HIGHT	020	120	$11,702	HIGH
NSMT030	Rock Creek Tributary Wildlife Reservoir in North Valley County	JENNINGS	066	80	$1,162	HIGH
RAMT001	Establishing a Tribal Colleges Clearinghouse for the Northern Great Plains	HAMILTON	910	230	$0	HIGH
NSMT027	Forest Vegetation Information System (FORVIS) Beta Test - Montana	HENSLEY	920	216	$2,445	NR
NSMT028	Montana Forest Vegetation Data Conversion and Load to the Forest Vegetation Information System (FORVIS)	HENSLEY	920	176	$0	HIGH
NSMT017	Natural Resource Damage Assessment (NRDA) Support for Whitewood Creek and Downstream Waters - South Dakota	BIERBACH	923	584	$0	HIGH
NSMT024	Litigation Support - Whitewood Creek NRDAR	BIERBACH	923	48	$0	HIGH
GSMT027	Montana 100K Mapping (FY 98)	DEBAR	926	4,471	$0	HIGH
GSMT029	Sunflower Mountain Landscape Analysis GIS Data Compilation	JEWELL	926	95	$44	HIGH
AEMT013	Billings Air Tanker Base Building Design Review	BERGUM	931	504	$8,079	NR
AEMT015	Miles City Fire Operations Office Building - Interior Office Space Drawings and Specifications	BERGUM	931	539	$0	NR

Montana

The following are brief descriptions of some of the projects completed for Montana in FY 99:

Project No.:	GSMT029
Project Name:	Sunflower Mountain Landscape Analysis GIS Data Compilation
Office:	MT074

Timber stands that had been delineated on natural color aerial photographs were visually transferred to orthophoto quadrangles. The resulting overlay was scanned, georeferenced, and used to on-screen digitize the timber stand polygons using ArcView. The polygons were cleaned up and attributed with the stand number from the photographs. Deliverables included the polygon coverage, metadata, the new digital orthophoto quads, and digital raster graphics of the area.

Project No.:	NSMT017
Project Name:	Natural Resource Damage Assessment (NRDA) Support for Whitewood Creek and Downstream Waters - South Dakota
Office:	MT923

NARSC has been assisting the Montana State Office and the Belle Fourche Field Office in the conduct of natural resource damage assessment activities on this site in western South Dakota. Activities have included conducting field sampling and analysis on public lands, as well as participating in natural resource trustee planning and negotiations with two other bureaus of the Department, the state of South Dakota, and the Cheyenne River Sioux Tribe. This site is an EPA National Priorities List site, where historic mining activities in the northern Black Hills caused releases of acidic mine drainage and toxic metals-laden tailings. These tailings have been washed downstream over 150 miles, from the mine source on Whitewood Creek into the Belle Fourche River, the Cheyenne River, and into Oahe Reservoir, coming to rest on riverbanks and injuring ecological health. The trustees have entered a cooperative settlement and consent decree with the responsible mining company, which will lead to trustee recovery of funds to conduct habitat restoration and ways to safeguard subsistence fishing uses. BLM manages several thousand acres of riverbank lands that have been impacted by these tailings. As part of the settlement, BLM and the mining company have agreed to make a land exchange to remove the affected lands from public ownership. The mining company will provide BLM with lands it desires for habitat quality in replacement for the impacted riverbank lands, which the company will take in exchange. The parties expect the exchange to be completed by January 1, 2000.

Project No.:	NSMT027
Project Name:	Forest Vegetation Information System (FORVIS) Beta Test -Montana
Office:	MT920

NARSC staff installed the beta test version of the Forest Vegetation Information System (FORVIS) in three Montana field offices: Missoula, Butte, and Dillon. On-site training was provided on the data requirements and the system features. FORVIS is a system for storage, retrieval, and analysis of data about forest lands. The system includes vegetation attribute and vegetation treatment information for mapped forest areas. It has on screen data entry, query, and update capability and provides formatted reports. Enhanced ArcView menus provide direct links to the database tables and provide spatial displays of polygon attributes. FORVIS uses informix software for the database tables and ArcView software for the geographic information system component.

Nevada

- Number of Projects Completed: 15
- Estimated NARSC Hours for Projects: 4,861
- NARSC Operations Costs for Projects: $7,887

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
GSNV010	Elko, Nevada, Aerial Photo Acquisition (NV98AI)	MARCHIO	010	580	$0	NR
NSNV073	Water Quality Support - Elko Field Office	CLUCK	012	112	$732	HIGH
NSNV076	Mason Valley Geophysical, Yerington	JAMES	030	80	$934	NR
AENV031	Pony Springs Fire Station Inspection	WILKIN	040	64	$0	NR
NSNV072	Sunrise Landfill Technical Assistance and Review of Ground Water Monitoring Plan	MORAN	050	388	$0	HIGH
GSNV013	Dry Lake Range, Nevada, Subsurface Limestone Deposit Geologic Model	CHATTERTON	053	520	$1,350	NR
NSNV058	CASHE Visit - Battle Mountain and Winnemucca Districts	SKINNER	920	120	$956	NR
NSNV078	Sunrise Landfill Administrative Record File	SKINNER	920	112	$0	NR
AENV034	Indian Creek Restroom Accessibility Revisions	EKSTAND	930	80	$0	HIGH
GSNV011	Nevada 100K Mapping (FY 98)	OBRIEN	946	393	$0	NR
GSNV015	Automated Nevada 500K Review	OBRIEN	946	144	$0	NR
RANV009	Develop and Implement the WHB Compliance Module	POGACNIK	960	948	$1,850	HIGH
RANV013	Enhance WH&B System	POGACNIK	960	360	$0	HIGH
RANV014	User Representative for HB System	POGACNIK	960	800	$2,065	HIGH
RANV016	WH&B Compliance Sampling	POGACNIK	960	160	$0	HIGH

Nevada

The following are brief descriptions of some of the projects completed in Nevada in FY 99:

Project No.:	AENV034
Project Name:	Indian Creek Restroom Accessibility Revisions
Office:	NV030

This project is located at the Indian Creek Campground approximately 30 miles south of Carson City off State Highway 89 and just east of the town of Markleeville, California. The project consists of an addition of 250 square feet (25 ft. by 10 ft.) of accessible men's and women's restrooms and showers and a small storage room. The original building has toilets and showers not complying with current accessibility standards. A construction contract for $67,600 was awarded to the Silverado Company of Hildale, Utah, in the spring of 1998 and construction was commenced. In midsummer, the contractor erected masonry walls that did not meet the drawing requirements. The contractor was directed to tear the walls down and reconstruct them according to the drawings. The contractor refused and withdrew from the job without further comment, resulting in a default by the contractor. In early 1999, the drawings and specifications were revised by the NARSC architect and the project was re-bid. In August, a contract for $58,760 was awarded to the A-Line Construction Company of Tarzana, California, to complete the project. The project is expected to be complete this fall.

Project No.:	NSNV072
Project Name:	Sunrise Landfill Technical Assistance
Office:	NV052

The Sunrise Mountain Landfill is a Recreation and Public Purpose lease to Clark County, Nevada, and served as the primary landfill for the city of Las Vegas from the early 1950s to early 1990s. Since closed, questions concerning its integrity and environmental condition prompted the U.S. Environmental Protection Agency (EPA) to serve orders to the county and the landfill operator, Republic Silver State Disposal. In support of EPA, NARSC provided expedited reviews of numerous characterization and closure documents prepared by Clark County and Republic Silver State Disposal. On numerous occasions, both formal and informal comments were delivered to both the Las Vegas District Office and Nevada State Office. All activities associated with these reviews are in support of the EPA Orders served to Clark County and Republic Silver State.

Project No.:	NSNV076
Project Name:	Mason Valley Geophysical Survey
Office:	NV030

Several liquid waste impoundments associated with a closed copper mill are located on public land administrated by the BLM. Documented releases from these impoundments were documented in 1984, and several attempts have been made to remediate the leakage; however, the concerns still continue. At the request of the Carson City District Office, NARSC performed an electromagnetic and electrical resistivity survey over a large area downgradient of the leaking impoundments. The geophysical survey indicated the possible area impacted by the leakage to be greater than anticipated, and ARCO was ordered by the Nevada Division of Environmental Protection (NDEP) to characterize the plume identified by the geophysical survey.

Project No.:	RANV009
Project Name:	Develop and Implement the WHB Compliance Module
Office:	WO260

The Compliance module was put into production in November

1998 as an enhancement to the Wild Horse and Burro disposal database, which tracks the disposition of animals removed from the public lands as they are prepared, shipped, adopted, and titled. BLM needed an automated way to keep track of compliance activities, which are intended to ensure adopters' compliance with the terms of the Private Maintenance and Care Agreement (PMACA). The PMACA requires that adopters provide humane care and treatment for the animals in their care and describes certain prohibited acts, such as selling untitled animals, treating animals inhumanely, and altering freeze marks. Field offices enter and extract compliance information from the system remotely. Training in use of the module was provided this year by the user representative to field offices in six State Offices. A user guide was provided, written cooperatively by NIRMC and NARSC.

New Mexico

- Number of Projects Completed: 17
- Estimated NARSC Hours for Projects: 5,117
- NARSC Operations Costs for Projects: $4,622

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NSNM031	FORVIS Beta Test - New Mexico	MILLER	017	200	$1,981	HIGH
AENM003	Taos Scenic River Conceptual Plan for River Access County Line Site Along Rio Grande River	SUNDIN	018	333	$1,455	NR
NSNM016	Chino Copper Mine EIS Air Resources Technical Assistance	CUSTER	036	34	$0	NR
NSNM015	Continental Copper Mine EIS Air Resources Technical Assistance	JENTGEN	037	34	$0	HIGH
NSNM023	Copper Flats EIS Air Resources Technical Assistance	JENTGEN	037	34	$0	HIGH
NSNM033	Broom Assessment	LACEWELL	060	108	$388	HIGH
RANM009	Develop Five Year Strategy Plan for EO 13021	GARCIA-BURKE	910	369	$0	NR
RANM010	Liaison with Haskell Indian Nations University (HINU)	GARCIA-BURKE	910	80	$0	NR
RANM013	Liaison with AISES	GARCIA-BURKE	910	498	$0	NR
RANM015	Cooperative Agreement between BLM and Crown Point Institute of Technology (CIT)	GARCIA-BURKE	910	160	$0	NR
RANM019	Spirit Lake Natural Resources Workshop	GARCIA-BURKE	910	100	$0	NR
NSNM020	Tar Creek Evaluation Phase II (CERCLA)	SINCLAIR	931	300	$0	NR
ICNM002	Edit State Functional Statement	SPLENDORIA	950	170	$0	NR
GSNM019	New Mexico 100K Mapping (FY 98)	HOMAN	952	1,827	$0	HIGH

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
GSNM021	Fort Craig Topographic Site Map	BEWLEY	952	520	$0	HIGH
GSNM022	Pueblo of Isleta DOJ/NMSO Support	BENNETT	952	30	$283	NR
GSNM024	Geodesy/GPS Technical Support for NM (FY99)	INNES	952	320	$515	MEDIUM

The following are brief descriptions of some of the projects completed for New Mexico in FY 99:

Project No.:	AENM003
Project Name:	Taos Scenic River Conceptual Site Plan
Office:	NM018

The objective of this project was to develop a conceptual site plan for a river access site along the Rio Grande River in New Mexico. The project was initiated to meet increasing public demand for access to the river for various recreation uses, provide for the health and safety of the visitor, and protect the existing natural resources. Typical recreation uses include white water rafting, fishing, mountain biking, wildlife viewing, and hiking. The increase in recreation use, changing demands and regulations, and deterioration of the natural resources were considerations addressed in development of the proposed site plan. A plan which provides access to the river, addresses the recreation demands of the public, provides facilities for the health and safety of the visitor, protects the natural resources, and meets current regulatory standards such as the Clean Water Act and the Americans with Disabilities Act was developed by the Architecture and Engineering Group of NARSC in consultation with the Taos Field Office Staff. If approved, the proposed site plan will be used as the basis for design development and the production of construction drawings.

Project No.:	NSNM031
Project Name:	FORVIS Beta Test - New Mexico
Office:	NM017

NARSC staff installed the beta test version of the Forest Vegetation Information System in the Albuquerque Field Office, New Mexico. On-site training was provided on the data requirements and the system features. FORVIS is a system for storage, retrieval, and analysis of data about forest lands. The system includes vegetation attribute and vegetation treatment information for mapped forest areas. It has on screen data entry, query, and update capability and provides formatted reports. Enhanced ArcView menus provide direct links to the database tables and provide spatial displays of polygon attributes. FORVIS uses Informix software for the database tables and ArcView software for the geographic information system component.

Project No.:	NSNM033
Project Name:	Broom Site Environmental Site Assessment
Office:	NM080

The Broom Site is a saltwater sales facility in an active oilfield which was abandoned in the 1980s. The site consists of a lined pit, a lined sump, four large water tanks, abandoned pump houses, an unlined pit, the burned remains of a trailer house, a shed, and an open trash pit. The site history included

massive saltwater releases, suspected midnight dumping, various discolored soils, pallets of deteriorating unknown chemicals, and other concerns. The City of Carlsbad had requested the purchase of a portion of the site. The field office requested assistance in determining the hazards associated with the site. NARSC and its contractors prepared a Field Sampling Plan, Investigation Derived Waste Plan, and Health and Safety Plan. Following 2 days of field work, samples were submitted to a laboratory for analysis. A draft and final site evaluation were prepared and delivered to the field office.

Oregon

- Number of Projects Completed: 9
- Estimated NARSC Hours for Projects: 2,382
- NARSC Operations Costs for Projects: . . .$40,883

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response
NSOR059	Lookout Mtn VRM Scoping Study	KELLERMAN	035	164	$0	NR
NSOR054	Update and Provide Training for TR 1737-12 "Using Aerial Photographs to Assess PFC of Riparian-Wetland Areas"	ELMORE	050	752	$9,430	HIGH
NSOR055	Technical Reference TR 1737-16 "Purpose of the Lentic Checklist Questions and Supporting Science for the PFC Technique"	ELMORE	050	440	$17,045	HIGH
NSOR056	Training and Field Assistance for BLM, FS, and NRCS Field Offices for the Applications of TR 1737-9, TR 1737-11, and TR 1737-15	ELMORE	050	300	$13,122	HIGH
NSOR052	Middle Creek Battery Site Removal Preliminary Assessment	VOTAW	120	100	$0	HIGH
NSOR060	Cleveland Mine Site Cleanup: Flow Estimates for Channel Restoration	JACOBOSKI	130	40	$0	NR
NSOR046	CASHE Visit - Burns District	MURPHY	932	120	$0	NR
NSOR047	CASHE Visit - Roseburg District	MURPHY	932	120	$1,286	NR
GSOR006	100K Mapping (FY 98)	BRINEY	957	346	$0	NR

Oregon

The following are brief descriptions of some of the projects completed for Oregon in FY 99:

Project No.:	NSOR046
Project Name:	CASHE Visit Burns Field Office
Office:	OR020

Burns Field Office facilities including its wild horse and burro facility, fire guard station, campgrounds, and a historic ranch site, were evaluated during a Compliance Assessment - Safety, Health, and the Environment (CASHE) visit conducted in September 1998. The CASHE Report identified three key areas: drinking water at the Field Office, campgrounds, and historic site is inadequately monitored; the storage of hazardous materials in extreme cold is causing those products to become unuseable and potential hazardous waste; and the manure management at the wild horse and burro facility needs to be improved. The Field Office has completed the majority of the findings. Findings status is tracked and reported on twice a year.

Project No.:	NSOR052
Project Name:	Middle Creek Battery Site Removal Preliminary Assessment (PA)
Office:	OR120

The Middle Creek Battery site is a site of illegal dumping of battery wastes along a remote mountain road in Coos Bay District, Oregon. Middle Creek is a salmon stream, and there was concern that heavy metals may have contaminated the stream. A CERCLA Preliminary Assessment was performed at the request of the District and EPA after most of the removal of the battery waste was completed. The PA included sampling using the NARSC X-ray fluorescence (XRF) spectrometer of soils in the dumping area and sediments in the stream. The PA identified a small amount of additional soil to be removed.

Project No.:	NSOR055
Project Name:	Technical Reference TR 1737-16 - Purpose of the Lentic Checklist Questions and Supporting Science for the PFC Technique
Office:	OR050

On March 20, 1996, BLM and the Forest Service (FS) signed a letter committing us to an "Accelerated Cooperative Riparian Restoration and Management" effort. The Natural Resources Conservation Service (NRCS) became a principal partner as we began to focus on a watershed scale in cooperation with all landowners. To be effective, we needed to establish common terms and definitions and minimum methods for evaluating the health and condition of these areas. The foundation for this effort was the "Process for Assessing the Proper Functioning Condition" that was developed by BLM in 1993. The project coordinated the preparation and release of Technical Reference TR 1737-16, A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lentic Areas. This technical reference provides BLM, FS, and NRCS field offices the information necessary to assess proper functioning condition of lentic riparian-wetland areas. This document strengthens TR 1737-11, Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas, by adding the supporting science. Those involved in the development of TR 1737-16 were Russ Krapf, Steve Leonard, and Don Prichard from the BLM, Mary Manning and Janice Staats from the FS, and Forest Berg, Robert Leinard, and Chris Noble from the NRCS. Activities involved writing a draft technical reference, obtaining a review of the document, analyzing and incorporating comments from the review, and writing a final document. Final editing was completed by Linda Hill from BLM NARSC, layout and design were performed by Jennifer Kapus from NARSC, and final production was handled by Sherri Hendren from BLM's National Business Center.

Utah

- Number of Projects Completed: 21
- Estimated NARSC Hours for Projects: 5,078
- NARSC Operations Costs for Projects: $6,069

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
GSUT058	Monitoring of the Bonneville Salt Flats Laydown Project	JOHNSON	020	256	$0	NR
GSUT060	Aerial Photo Interpretation Training Course	JOHNSON	020	156	$431	NR
NSUT033	CASHE Assessment - Salt Lake City District Office	BROWN	020	120	$747	HIGH
NSUT037	Manning Canyon Tailings PRP Search and NRDAR Screening	CARPENTER	020	186	$331	HIGH
NSUT041	Well Site Investigation (Cycle Springs Well)	HARDY	020	64	$52	HIGH
GSUT033	Analysis of Classified NTM Data for the Grand Staircase-Escalante National Monument (EIAP Study)	MEREDITH	030	640	$343	NR
ICUT005	Edit, Design, and Layout the St. George Field Office Record of Decision and Resource Management Plan Document and Prepare it for Printing	MERMEJO	045	180	$0	NR
NSUT039	Waterpower Assessment of Power Site Reserve 34	MASSEY	045	50	$0	NR
GSUT054	GIS Assistance for Hydrologist at the Richfield, Utah, Field Office	ZIEG	052	320	$309	NR
NSUT026	Ground Water Assessment of Gandy Marsh, West Desert, in Utah	ZIEG	052	84	$1,319	NR
GSUT056	Ken's Lake Recreation Site - Photogrammetric Compilation	SWEETEN	060	300	$102	HIGH

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NSUT042	River Gas Environmental Review (Coalbed Methane)	FLOOD	066	60	$768	NR
NSUT038	Utah Land Exchange Environmental Site Assessments	CATLIN	930	352	$0	HIGH
NSUT034	Ferron Natural Gas EIS Air Resources Technical Assistance (Continuation)	WAGNER	932	87	$0	NR
NSUT040	Technical Assistance - Emery County, UT, Soil Survey (Continuation)	MAXFIELD	932	244	$1,612	HIGH
NSUT043	Mapping the Location of Utah's Low-Income and Minority Populations	WILLIAMS	934	52	$13	NR
AEUT017	Department of the Interior Conference on the Environment - Poster Session	DUNCAN	941	46	$42	HIGH
GSUT039	Utah 100K Mapping (FY 98)	ROTH	941	1,653	$0	NR
GSUT049	San Rafael Swell Resource Aerial Photography (UT98BC)	CASPER	941	108	$0	HIGH
GSUT055	Scoping of the San Rafael Swell Route Inventory Proposal	GRAY	941	80	$0	NR
GSUT057	Scanning Geologic Data for Eight 100K Maps in Utah	CASPER	941	40	$0	HIGH

The following are brief descriptions of some of the projects completed for Utah in FY 99:

Project No.:	GSUT058
Project Name:	Monitoring of the Bonneville Salt Flats Laydown Project
Office:	UT020

The Salt Lake City Field Office requested assistance in developing a long-term monitoring methodology in support of the Bonneville Salt Flats Laydown Project. The thickness of the salt that creates the foundation of the salt flats has been deteriorating for a number of years. The purpose of the laydown project, a joint venture between the state of Utah and Riley Industries, is to enhance the natural flooding of the flats with additional brine solution by pumping the solution from Riley's evaporation ponds onto the salt flats. The monitoring program would be designed to evaluate the effectiveness of this program by measuring the extent of the flooding, and if possible, the chemical makeup of the brine via remote sensing technology. Landsat TM scenes were acquired before and after the initial year of flooding, 1998, as well as the previous 4 years to help establish a baseline of information. The extent of the pond before and after the flooding was computed. This analysis work was based on a subset area of the TM scene classified with an unsupervised maximum likelihood classification.

An additional delivery was a written discussion of the potential use of hyperspectral data to evaluate the chemical composition of the brine while in solution. Additional TM scenes have recently been obtained by NARSC in support of the Salt Lake City Field Office for this multi-year investigation.

Project No.:	ICUT005
Project Name:	Edit, Design, and Layout the St. George Field Office Record of Decision and Resource Management Plan Document and Prepare it for Printing
Office:	UT045

NARSC provided writing/editing and design/layout services for the St. George Field Office Record of Decision and Resource Management Plan. The Plan sets forth a vision, objectives, and land use prescriptions for the management of public lands and associated natural resources administered by the BLM in Washington County, Utah. How these lands will be used and managed in the future is of great importance to a wide variety of local, state, and national interests and will also have considerable impact on communities, agencies, businesses, interest groups, individuals, and others who use or depend on public lands.

Project No.:	NSUT038
Project Name:	Utah Land Exchange Environmental Site Assessments
Office:	UT930

As part of the Congressionally mandated consolidation and lands trade in the Grand Staircase-Escalante National Monument, NARSC was asked to perform Phase I Environmental Site Assessments (ESAs) for eleven parcels to be transferred to the State. The parcels together amounted to approximately 125,330 acres. NARSC specialists conducted the historical aerial photo review of all of the parcels. NARSC contractor, C.C. Johnson and Malhotra, performed site visits and file reviews and prepared nine separate ESAs in accordance with the guidance from the Department and the American Society for Testing and Materials. The ESAs also included the results of the aerial photo review. The work indicated that lands were not likely to be contaminated and were suitable for transfer.

Project No.:	RAWO208 (For Utah but listed under WO)
Project Name:	BLM Waterpower and Reservoir Resources Lead (Waterpower Assessment of Power Site Classification 93 in Utah)
Office:	WO350 (UT081)

The Vernal Field Office is pursuing a land exchange in which the proponent would acquire land that is withdrawn in Power Site Classification No. 93, created by unnumbered Secretarial Order of April16, 1925. The proponent is willing to accept patent to the land with restrictions that are provided by Section 24 of the Federal Power Act. NARSC prepared a Waterpower and Reservoir Resources Report which describes undeveloped hydroelectric potential of the lands, the options for action, and the BLM recommendations. NARSC also furnished a draft letter to the Federal Energy Regulation Commission for the Field Office's use.

Wyoming

- Number of Projects completed: 18
- Estimated NARSC Hours for Projects: 6,524
- NARSC Operations Costs for Projects: . . .$16,296

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
GSWY029	Red Gulch Wyoming Dinosaur Tracksite Topographic Base Map	BARNES	010	324	$0	HIGH
GSWY033	Low Altitude High Resolution (LAHR) Photographing of Selected Areas in the Red Gulch Dinosaur Tracksite ACEC and the Big Cedar Ridge ACEC, BLM Worland Field Office	BAKER	010	200	$630	HIGH
GSWY030	Close Range Photography of Dinosaur (Sauropod) Skeleton near Shell, Wyoming	HARE	020	52	$0	MEDIUM
AEWY027	Mechanical and Electrical Engineering Support for the Rawlins Warehouse Addition	ROSEBERRY	030	376	$349	HIGH
NSWY014	Continental Divide/Wamsutter II EIS Air Resources Technical Assistance	MILLER	037	87	$1,050	HIGH
NSWY015	South Baggs EIS Air Resources Technical Assistance	JACKSON	037	34	$0	NR
AEWY024	Electrical Work at the Rock Springs Horse Corral and the Fontenelle Campground	SCHRAMM	040	320	$246	HIGH
AEWY025	Rock Springs District Office Repair	SCHRAMM	040	400	$314	NR
AEWY026	Rock Springs District Office Warehouse Reroofing	SCHRAMM	040	424	$314	NR
ICWY007	Booklet - "Assessing Lentic Wetland Health Using the Proper Functioning Condition Method"	DONCASTER	040	56	$0	HIGH
NSWY025	Proposed Stock-Water Wells in Sublette County, Wyoming	HOWLAND	046	76	$39	NR
AEWY022	Kemmerer Resource Area Office Restructure	RAWSON	047	220	$0	HIGH

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
AEWY028	Bar C and Pathfinder Bridge Inspections	SKILLMAN	060	36	$151	HIGH
GSWY008	Development of GIS Multivariate Analysis Methods to Automatically Classify Similar Terrain Units from Digital Elevation Models	HINRICHSEN	060	3,132	$11,385	NR
NSWY028	Greater Yellowstone Interagency Brucellosis Committee (GYIBC) Participation and Support	DANIELS	930	160	$1,818	MEDIUM
NSWY027	BLM - EPA Air Quality Coordination	DANIELS	930	48	$0	MEDIUM
GSWY026	Assist with Landcover Classification of Newcastle Resource Area	MEYER	950	240	$0	NR
GSWY021	Wyoming 100K Mapping (FY 98)	MADIGAN	955	179	$0	NR

The following are brief descriptions of some of the projects completed for Wyoming in FY 99:

Project No.:	AEWY028
Project Name:	Bar C and Pathfinder Bridge Inspections
Office:	WY060

This project consisted of the technical inspections of two bridges out of the Casper, Wyoming, Field Office - Pathfinder Bridge at Pathfinder Reservoir and Bar C Bridge near Kaycee, Wyoming. After completion, copies of the inspection reports were sent to the State Office in Cheyenne and to the Casper Field Office. The inspection reports included the conditions found during the inspections and recommendations for maintenance and repairs.

Project No.:	GSWY008
Project Name:	Development of GIS Multivariate Analysis Methods to Automatically Classify Similar Terrain Units from Digital Elevation Models
Office:	WY060

The project involved development of automated GIS multivariate analytical techniques to identify units with similar terrain morphologic and hydrologic properties (Similar Terrain Units or STUs) from digital elevation models (DEMs) and apply them on an eighteen 7.5 minute quadrangle project area in Natrona County, Wyoming. The methods include using several GIS terrain analysis techniques, some available in ARC/INFO and some developed for this project, to separate the project area into micro-watersheds, then to statistically analyze each micro-watershed in terms of elevation, slope gradient, slope length, and flow accumulation characteristics (including ratios of these variables) to determine regions with similar morphologic and hydrologic properties. The regions are determined by comparing several statistical values for each micro-watershed and then using interactive self-organizing clustering and maximum likelihood class assignment techniques to separate the input values into distinct classes and clusters of similar micro-basins. Data collected in the field indicate that, at least in the current

project area, there is a good correlation between local geology, its surface expression, and vegetation cover, due to the fact that in high relief areas terrain has a powerful influence on ecosystem processes. The methodology should be applicable in all high and even medium relief areas (it doesn't apply to flats where terrain shape does not have as much effect) to regionalize the areas into groups of geomorphologically and hydrologically similar watershed unit clusters. This permits prescription of management practices to entire regions rather than individual watersheds and allows for extrapolation of field data collected in gauged watersheds to the ungauged hydrologic units. While this aspect of the methodology requires further work, the apparent good correlation of terrain units with vegetation cover indicates that for high and medium relief terrain areas the terrain methods can pick out similar ecosystem sub-units. The methods developed for this project will most likely be utilized in the near future to compare gauged watershed data in the project area to the ungauged areas and to derive some of the watershed morphometric parameters used for hydrologic modeling. The physical product of this project is a geographic database in ARCVIEW GIS which contains maps of input data and the results of several approaches to STU modeling (changing with the input variables utilized and numbers of classes). The multi-variate methods can also be utilized for comparing any of several related environmental variables for various analytic purposes and can be applied to develop other types of regions that exhibit a range of similar properties. The stream network and watershed boundary delineation, as well as other terrain analysis AML software prepared for the project, is currently being transferred to interested resource and GIS specialists throughout the BLM and is part of a Bureauwide GIS technology exchange effort.

Project No.:	GSWY029
Project Name:	Red Gulch Wyoming Dinosaur Tracksite Topographic Base Map
Office:	WY010

The Red Gulch Dinosaur Tracksite (RGDT) lies on the eastern edge of the Bighorn Basin of Wyoming and covers 40 acres of land managed by the BLM Worland Field Office. In the spring of 1997, dinosaur tracks were found at the RGDT in a dry wash which lies along the Red Gulch/Alkali National Back Country Byway. The tracks were formed along the shoreline of an ancient sea during the Middle Jurassic, 165 million years ago. Before the tracks were discovered, the whole area was believed to be covered by the Sundance Sea, however, footprints of terrestrial creatures have resulted in the paleogeographic history of the entire region to be reevaluated. The tracksite is also significant because little is known about Middle Jurassic dinosaurs. Paleontologists from the University of Wyoming studying the tracksite over the past 2 years have documented over 600 tracks in the dry wash on a surface known as the "Ballroom," an area of approximately 500 square meters. They estimate that well over 1,000 tracks may be preserved within the 40 acres of the RGDT, making it the most extensive dinosaur tracksite in Wyoming. The RGDT provides unique recreational opportunities to the public, not only to view a snapshot of events during the time of the dinosaurs but also to see and interact with the scientific investigations being conducted at the tracksite. To support the design of recreational facilities at the RGDT, NARSC produced a 2-foot topographic contour map of the 40 acres from 1:3000 scale aerial photography. A digital terrain model (DTM) of the area was produced using NARSC's softcopy photogrammetric workstation. The DTM

was then used to produce a natural color digital orthophoto from 1:1800 scale aerial photography. The contour map and the orthophoto were used to evaluate options for the locations of the roads and trails in the 40 acres and as a base for the final facilities design. The Red Gulch Dinosaur Tracksite Topographic Base Map is being utilized in the management of the site for public recreational use and to assist in preserving the value of the resource for the future.

Project No.:	ICWY007
Project Name:	Booklet - "Assessing Lentic Wetland Health Using the Proper Functioning Condition Method"
Office:	WY040

The layout for a 4-1/4 inch by 11 inch, 12 page booklet, incorporating text, photographs, and illustrations, was prepared by a visual information specialist. The booklet explains, in plain language and attractive format, what lentic (standing water) wetlands are, why they are important, and what affects their health and function. The booklet will be copied in black and white by the Field Office to satisfy local demand. The booklet will be available for distribution by the Field Office to interested customers and the general public.

National Centers

- Number of Projects Completed: 11
- Estimated NARSC Hours for Projects: 1,782
- NARSC Operations Costs for Projects: . . .$8,064

NIFC

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NCFA037	Air Quality Liaison for Smoke Management Activities	DUNTON	130	80	$515	NR
NCFA038	NEPA and Fire Management Planning Presentation at the Fire and Resources Workshop (Implementing the Federal Wildland Fire Policy Workshop)	MILLER	130	24	$3,181	HIGH
NCFA031	CASHE Assessment - NIFC	PALMER	203	120	$1,397	HIGH
NCFA035	New Sanitary Facilities for NIFC Building 410-A	NELSON	280	480	$78	HIGH

NIRMC

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NCDC044	Design for Building 40 Entrance Doors	BYERS	133	40	$0	NR

NTC

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NCTC076	AML Site Characterization (1703-14) and Environmental Site Characterization Class (1703-3)	SYKES		440	$0	NR
NCTC077	Instruct at NTC Course 1703-9	SYKES		150	$197	NR
NCTC078	HAZMAT Management Training Revision and Planning	SYKES		56	$2,696	NR
NCTC080	Ground Water Training Course FY 99	FECHNER		240	$0	HIGH

NHRMC

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NCDC046	Diversity Project	Dukes	210	72	$0	NR

NBC

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
NCDC047	MasterCard Update Newsletters	Martin	600	80	$0	NR

Washington Office

- Number of Projects Completed: 130
- Estimated NARSC Hours for Projects: . . .68,502
- NARSC Operations Costs for Projects: . .$359,339

* Pass through Operational Funds $548,922

Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
RAWO166	NARSC-Science Advisor	VAN HAVEREN	100	296	$5,919	HIGH
AEWO082	Support to the Industrial Advisory Council at Florida A&M University	SHAFRAN	107	92	$1,860	NR
ICWO088	SCEP Training Document	SHAFRAN	107	52	$0	HIGH
AEWO067	ISTEA Lead	BISSON	200	1,075	$8,182	NR
GSWO051	Maintenance of 100k Maps Specifications and Standards	HARNE	210	234	$0	NR
GSWO056	BLM Public Lands and Administrative Jurisdictions Map (Revision)	HARNE	210	374	$888	HIGH
GSWO074	Community-based Planning Assistance	TAYLOR	210	116	$656	NR
GSWO077	Interagency DEM Coordination and Management	HARNE	210	100	$0	NR
GSWO079	Restocking of BLM 100K maps	HARNE	210	1,044	$0	NR
GSWO080	Management of BLM Aerial Photo Lab and Archive	HARNE	210	1,740	$17,758	NR
GSWO081	Management of Interagency Printing Activities	HARNE	210	348	$1,077	NR
GSWO082	Interagency Geographic Sciences Coordination	HARNE	210	190	$324	NR
GSWO083	Aerial Photo Assistance	HARNE	210	510	$0	NR
GSWO085	NARSAP Coordination	HARNE	210	680	$0	NR
GSWO086	Utilization of Classified Data	HARNE	210	320	$755	NR
GSWO087	GIS Workshop 1999	HARNE	210	400	$3,022	NR
GSWO091	Assembling Spatial Data Available in the Scientific Community for Use in BLM Planning and Management	GREEN	210	1,222	$1,444	NR

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
GSWO095	Automated 100K mapping	HARNE	210	1,190	$655	NR
GSWO097	Support Communications within Geographic Sciences throughout BLM	HARNE	210	600	$0	NR
GSWO098	ESRI Users Conference	HARNE	210	128	$5,390	NR
GSWO099	Management of the BLM Satellite Imagery Repository	HARNE	210	298	$3,489	NR
GSWO100	Develop Socioeconomic Coverage for GIS	STONE	210	400	$0	NR
GSWO104	Development and Support of Rangeland Spatial Application	GREEN	210	380	$0	NR
RAWO207	USGS Science Center Evaluation	HAUGH	210	90	$0	HIGH
RAWO213	National Interagency Technical Team (NITT) on Ecological Units Mapping	STONE	210	780	$2,792	NR
NSWO022	Develop Rangeland Soil Guide	VOIGT	220	256	$380	NR
NSWO070	Federal Interagency Sedimentation Project	JANES	220	160	$10,761	HIGH
NSWO072	Represent BLM on National Cooperative Soil Survey Technical Activities	BORCHARD	220	280	$1,676	NR
RAWO167	SSST Weeds Data Base	HAMILTON	220	260	$1,998	NR
RAWO209	Weed Research	HAMILTON	220	120	$0	HIGH
RAWO211	BLM Lead for Service First Grazing Administration Effort	DELANEY	220	350	$0	NR
RAWO217	Y2K Validation for GABS and RIPS	DELANEY	220	160	$0	NR
RAWO219	Revise Rangeland Monitoring Technical Reference 4400-7, Analysis, Interpretation, and Evaluation	ROBERTS	220	240	$649	NR
RAWO220	Prepare Addendums to 1734-3 and 1734-4 and Reprint Both	ROBERTS	220	220	$8,711	NR
RAWO221	Climate and Weather Technical Reference	ROBERTS	220	520	$0	NR
RAWO228	Represent BLM on the Federal Geographic Data Committee	BORCHARD	220	80	$0	NR
RAWO235	IDS/IDSU User Representative	RAMEY	220	370	$0	NR
RAWO237	Investment Analysis Model (IAM) User Representative	RAMEY	220	90	$0	NR

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
RAWO242	Rangeland Health MOU Workgroup	ROBERTS	220	207	$1,458	NR
RAWO243	Rangeland Improvement Project System (RIPS) User Representative	RAMEY	220	350	$744	NR
RAWO244	Grazing Authorization and Billing System (GABS) User Representative	RAMEY	220	1,200	$10,792	NR
RAWO254	Prepare Annual Rangeland Inventory, Monitoring, and Evaluation Report	RAMEY	220	180	$0	NR
RAWO256	BLM Representative to the IMPROVE Steering Committee	RAMEY	220	100	$1,500	NR
RAWO259	Bureauwide Air Quality Liaison	ARVISO	220	240	$1,294	NR
RAWO260	Bureauwide Climate Liaison	ARVISO	220	120	$130	NR
RAWO261	BLM Representative to Interagency WESTAR Council	ARVISO	220	160	$1,080	NR
RAWO265	Riparian Data	BORCHARD	220	80	$0	NR
NSWO074	BLM Wildlife Diseases Technical Assistance	HILLIARD	230	136	$646	NR
NSWO090	BLM Mountain Sheep Working Group Support	HILLIARD	230	288	$2,423	NR
NSWO091	USFS Forest Inventory & Analysis National Meeting	STEWART	230	48	$900	HIGH
RAWO183	FORVIS '98 - ARC VIEW Applications	TORGERSEN	230	1,280	$1,967	NR
RAWO215	Data Conversion to Informix/MS Access	JAUHOLA	230	500	$0	NR
RAWO216	Expertise Directory	SILVEY	230	310	$1,250	NR
RAWO218	User Representative for SSST, IHICS, WORDS, RAIDS, PLS, HMP	JAUHOLA	230	864	$2,073	NR
RAWO227	FORVIS Beta Test Prep	TORGERSEN	230	424	$0	NR
RAWO241	Timber Sale Information System (TSIS)	STEWART	230	1,440	$7,249	NR
GSUT051	Utah Wilderness Inventory Review Report	JARVIS	240	1,148	$0	NR
GSWO092	Wilderness Data	PORTER	240	80	$906	NR
AEWO076	Recreation Management Information System (RMIS) Lead	RAWHOUSER	250	160	$0	NR
AEWO077	Accessibility	ELLIS	250	80	$270	NR
GSWO076	Show-Tell on West Mohave Project at National Symposium	Peterson	250	40	$837	HIGH

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
ICWO092	BLM Interpretive Strategy Plan	GALPERIN	250	120	$0	HIGH
RAWO205	VRM Program Coordination/Services	SCHMITT	250	1,200	$1,566	NR
RAWO232	FS/BLM Technology & Development Recreation Projects	SCHMITT	250	200	$1,292	NR
RAWO236	VRM Training Coordination	SCHMITT	250	1,080	$3,308	NR
ICWO091	Wild Horse and Burro Handbooks	HAMPTON	260	90	$0	NR
RAWO212	Fluid Minerals Support for Automated Systems	BROWN	310	936	$0	NR
RAWO229	MMS/BLM Liaison and Data Transfer/ Special Projects	BARNETT	310	600	$0	NR
RAWO230	MMS/BLM Outreach	BARNETT	310	280	$1,006	NR
RAWO231	Federal Technical Subcommittee Support	KAARLEIA	310	172	$0	NR
RAWO252	Automated Fluid Minerals Support System (AFMSS)	BROWN	310	1,770	$472	NR
GSWO069	Geodesy/GPS Support of WO Cadastral Survey	BUHLER	350	520	$775	NR
GSWO072	A GPS Controlled Large Scale Remote Control Aerial Photography	BUHLER	350	1,540	$5,337	NR
GSWO089	Argonne National Laboratory MOU Coordination	MONTAGNA	350	80	$0	NR
ICWO075	Cadastral Survey Notes and Plats	BUHLER	350	2,240	$4,982	NR
ICWO076	Update Cadastral Survey Notes and Plats	BUHLER	350	2,880	$16,457	NR
ICWO077	Storage of Microfilm Masters	BUHLER	350	120	$0	NR
GSWO093	APD Production Training	BUHLER	350	40	$0	NR
ICWO078	Microfilm Services	BUHLER	350	1,720	$150	NR
ICWO081	Exhibit and Brochure for Cadastral Survey	ADER	350	144	$0	MEDIUM
ICWO087	Micrographics Transition Plan	BUHLER	350	48	$0	NR
RAWO208	BLM Waterpower and Reservoir Resources Lead (Waterpower Assessment of Power Site Classification 93 in Utah)	HOLDREN	350	1,213	$3,323	NR
RAWO253	NARSC Lead for Federal Energy Regulation Commission Relicensing Efforts	HOLDREN	350	560	$2,830	NR
AEWO059	User Rep and Tech Support for FIMMS	FORCE	360	1,648	$13,465	NR
AEWO064	FIMMS Backlog Data Collection	FORCE	360	268	$550	NR

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
AEWO065	Dam Safety Lead	FORCE	360	280	$354,774*	NR
AEWO066	Value Engineering Lead	FORCE	360	174	$3,280	NR
AEWO068	Sustainability Program/Work Group	FORCE	360	320	$0	NR
AEWO069	National Lead for Energy Conservation	FORCE	360	280	$1,206	NR
AEWO070	BLM Metric Program	FORCE	360	360	$0	NR
AEWO071	Bridge Safety BLM Lead	FORCE	360	56	$2,130	NR
AEWO072	Engineering Advisory Team	FORCE	360	140	$5,118	NR
AEWO073	Denver Club Fed	FORCE	360	60	$0	NR
AEWO075	Coordinate Data Standards for FIMMS and GIS with WO and Other Centers	GRIFFITH	360	200	$0	NR
AEWO078	Guide Specifications for Construction Support	FORCE	360	840	$2,270	NR
AEWO079	Upgrade FIMMS Data	FORCE	360	142	$0	NR
AEWO080	Seismic Safety in BLM Buildings	FORCE	360	880	$99,900*	NR
AEWO081	FIMMS Support	FORCE	360	820	$2,744	NR
GSWO103	Abandoned Mine Lands Mapping	STONE	360	100	$0	NR
NSWO063	New Technical Assistance Contract Administration	HYDE	360	960	$21,762	NR
NSWO080	DOI NRDA Policy Work Group	HYDE	360	200	$1,745	NR
NSWO082	Technical Assistance Contract Administration	HYDE	360	1,651	$42,488*	NR
NSWO083	Continue Contract Administration and Related Work for NRDA Screenings	KNIGHT	360	216	$2,003	NR
NSWO084	DOI Environmental Conference Planning	MORRIS	360	240	$0	HIGH
NSWO085	Program Coordination, Project Support for NRDA	HYDE	360	240	$2,861	NR
NSWO086	NRDA DOI Project Fund Allocation Group	HYDE	360	88	$2,656	NR
NSWO093	BLM HAZMAT Information System, Report of Activities from 1990 to Present	STONE	360	80	$0	HIGH
NSWO094	BLM/EPA Transient Non-Community Drinking Water Training Course	HYDE	360	104	$8,674	MEDIUM
NSWO096	Conversion of BLM Proposed HAZMAT Site Relative Risk Model from dBase to Access	DEAN	360	98	$0	NR
RAWO210	Cost Recovery/Cost Avoidance Program Administration and Policy Development	DUDLEY	360	1,255	$51,760*	NR

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Project Number	Project Name	Client	Office	Hours	Ops	Customer Satisfaction (NR=no response)
RAWO222	Military Lands: Closures, Transfers, UXO	DUDLEY	360	360	$0	NR
RAWO223	National Abandoned Mine Lands Home Page/ Web Site	STONE	360	728	$0	NR
RAWO225	Abandoned Mine Lands	STONE	360	880	$794	NR
RAWO246	AML Safety Brochure	STONE	360	146	$655	HIGH
RAWO263	Draft Guidance Document for the NCP Removal Process	STONE	360	64	$0	HIGH
GSWO078	Support IRMAC Internet Technical Team	NEDD	500	120	$2,340	NR
ICWO073	Provide BLMwide Professional Library Services (FY 99)	HECKER	540	10,440	$140,411	NR
ICWO066	BLM Lands Exhibit Map	HUNT	610	48	$0	NR
ICWO069	Public Rewards from Public Lands 1998	HUNT	610	168	$0	MEDIUM
ICWO082	Women and Homesteading Article	JUNIUS	610	60	$0	NR
ICWO079	Environmental Education and Volunteers Cataloging/Circulation Project	BOOTH	650	150	$0	NR
ICWO086	Making a Difference, BLM's 1997 Volunteer Annual Report	BOOTH	650	62	$0	HIGH
ICWO089	National Public Lands Day 1999	TISDALE	650	135	$0	NR
ICWO090	Vice President Gore's Catalysts for Change Brochure	SCHWAGER	650	24	$0	NR
ICWO094	Making a Difference - BLM's 1998 Volunteer Annual Report	TISDALE	650	68	$0	NR
GSWO101	GIS Recommendations for Langston University	NUNN	720	60	$949	NR
ICWO071	Langston University Video	NUNN	720	232	$1,793	NR
RAWO238	HBCU Liaison with Alabama A&M University	NUNN	720	120	$0	NR
ICWO074	BLM Annual Report - 1998	HATFIELD	800	104	$0	NR
ICWO084	FY 98 Customer Satisfaction Report	KEITH	830	80	$0	HIGH

Washington Office

The following are brief descriptions of some of the projects completed for the Washington Office in FY 99:

Project No.:	GSWO104
Project Name:	Development and Support of the Rangeland Information System
Office:	WO210

As part of the GIS strategy for permit renewal, the Rangeland Information System (RIS) was developed. RIS is a customized ArcView GIS application that provides user friendly access to the GABS and RIPS data spatially related to allotment boundaries. The user needs a rudimentary working knowledge of ArcView in order to run the RIS application. This is because there are built- in analysis and display functions that provide the user with a "point and click" GIS. The user can point to an allotment, click a button on the "button bar" on the screen to view the operator, permit, or rangeland improvement information. With the click of another button, the user can create a page size map to put in the operator file or to give to the operator. The resource specialist or manager utilizing this application now has much of the rangeland data at his/her finger tips.

Project No.:	ICWO089
Project Name:	National Public Lands Day (NPLD) 1999
Office:	WO650

The NPLD is a program of the National Environmental Education & Training Foundation (NEETF) in partnership with BLM, Fish and Wildlife Service, USDA Forest Service, National Park Service, Department of Defense, Army Corps of Engineers, Environmental Protection Agency, Tennessee Valley Authority, Environmental Alliance for Senior Involvement, The Garden Club of America, Keep America Beautiful, National Association of Service and Conservation Corps, Public Lands Foundation, and Roundtable Associates. Other sponsors include: Leave No Trace, Outdoor Life Network, BHP, REI, and TOYOTA. NPLD encourages companies and individuals to volunteer 1 day a year to help build trails and bridges, restore facilities, plant trees, improve wildlife habitat, and much more. Sponsors provide the necessary tools, equipment, food, and beverages. On just 1 day in 1998, volunteers and community partners produced nearly $1.5 million worth of improvements to public lands. NARSC has provided the design and production of the NPLD promotional products since 1995. The products include a large collector's poster, a small informational poster, a brochure, certificates, and stationary. In 1996, NARSC designed an NPLD logo that has been used on all the products since then. Each State is responsible for any other handout products it wants to supply to the volunteers, such as T-shirts, water bottles, etc. NARSC supplies them with a digital version for the logo in whatever format is needed.

Project No.:	NSWO070
Project Name:	Federal Interagency Sedimentation Project
Office:	WO220

The BLM is a participating member in the Federal Interagency Sedimentation Project (FISP), which was first established in 1939 to develop governmentwide standards for sampling equipment and procedures for measurement and analysis of water-borne sediments. BLM participation in the FISP is governed by an MOU establishing a Technical Committee that oversees project activities. NARSC provides both funding and Technical Committee representation for BLM to ensure that certain FISP activities

address BLM needs for sediment data collection and analysis tools. BLM is particularly interested in development of standard equipment and procedures for sampling/measurement of (stream) bed material and bed-material load in support of Abandoned Mine Land assessments, as well as assessments of aquatic health of streams occurring on public lands.

Project No.:	RAWO236
Project Name:	Visual Resource Management (VRM) Training Coordination
Office:	WO250

In support of the BLM VRM Program, NARSC developed a VRM training strategy, designed and coordinated VRM courses, provided instructors, and developed course materials and power point presentations for two VRM courses in New Mexico and Idaho. In addition, NARSC designed and coordinated the development of the master student VRM notebook for use in all future VRM training.

Project No.:	RAWO246
Project Name:	Abandoned Mine Land (AML) Safety Brochure
Office:	WO360

A national color brochure entitled "Abandoned Mines are Potential Killers" targets recreationists who visit public lands in areas of historic mining activity. The brochure highlights the hazards associated with formerly mined areas that have not been properly closed and emphasizes the dangers of entering abandoned mine structures and openings, explains why these hazards exist on public lands, and underscores the physical risks with examples of actual accidents and survival stories. Copies of the brochure have been provided to each BLM State Office for distribution to the public through its field offices. The Mine Safety and Health Administration has also shown an interest in the brochure in connection with its Mine Safety Awareness Campaign, a national interagency educational program involving MSHA, the Departments of the Interior and Agriculture, and others. Parts of the brochure are also incorporated into the newly developed national BLM AML web site which can be accessed from the NARSC home page (under NARSC Sites).

— Appendix 1—Program Support —

Program Support:

The projects identified below were completed in FY 99 and are listed under the program they supported. Some projects provided support to more than one program.

Multi-Program Support

Project No.	Project Name	Client	State	Office
GSCA010	California 100K Mapping (FY 98)	MING	CA	942
GSCO020	Colorado 100K Mapping (FY 98)	SHAUER	CO	954
GSID030	Idaho 100K Mapping (FY 98)	BUNCH	ID	956
GSMT027	Montana 100K Mapping (FY 98)	DEBAR	MT	926
GSNM019	New Mexico 100K Mapping (FY 98)	HOMAN	NM	952
GSNV011	Nevada 100K Mapping (FY 98)	OBRIEN	NV	946
GSNV015	Automated Nevada 500K Review	OBRIEN	NV	946
GSOR006	100K Mapping (FY 98)	BRINEY	OR	957
GSUT039	Utah 100K Mapping (FY 98)	ROTH	UT	941
GSWO091	Assembling Spatial Data Available in the Scientific Community for Use in BLM Planning and Management	GREEN	WO	210
GSWO051	Maintenance of 100k Maps Specifications and Standards	HARNE	WO	210
GSWO056	BLM Public Lands and Administrative Jurisdictions Map (Revision)	HARNE	WO	210
GSWO077	Interagency DEM Coordination and Management	HARNE	WO	210
GSWO079	Restocking of BLM 100K Maps	HARNE	WO	210
GSWO080	Management of BLM Aerial Photo Lab and Archive	HARNE	WO	210
GSWO081	Management of Interagency Printing Activities	HARNE	WO	210
GSWO083	Aerial Photo Assistance	HARNE	WO	210
GSWO085	NARSAP Coordination	HARNE	WO	210
GSWO086	Utilization of Classified Data	HARNE	WO	210
GSWO087	GIS Workshop 1999	HARNE	WO	210
GSWO095	Automated 100K Mapping	HARNE	WO	210
GSWO098	ESRI Users Conference	HARNE	WO	210
GSWO099	Management of the BLM Satellite Imagery Repository	HARNE	WO	210
ICWO073	Provide BLMwide Professional Library Services (FY 99)	HECKER	WO	540
ICWO066	BLM Lands Exhibit Map	HUNT	WO	610
GSWO089	Argonne National Laboratory MOU Coordination	MONTAGNA	WO	350
RAWO166	NARSC-Science Advisor	VAN HAVEREN	WO	100
GSWY021	Wyoming 100K Mapping (FY 98)	MADIGAN	WY	955

Soil, Water, and Air (1010 and 6333)

Project No.	Project Name	Client	State	Office
NSAK036	Stream Dynamics and Channel Design Workshop	STERIN	AK	930
NSAZ040	Cienega Creek Restoration	SIMMS	AZ	046
NSCA058	Harper Dry Lake Wetland Water Needs	EGAN	CA	068
GSCO029	Colorado Interagency Vegetation Classification - FY 99	CAROCHI	CO	052
NSCO046	BLM Representative to Colorado Interagency Air Resource Management Groups (WATF, AQCC, etc.)	DAVIS	CO	932
NSCO044	Glenwood Springs Natural Gas Environmental Impact Statement (EIS)	MOORE	CO	078
NSCO051	Lark Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	CO	038
NSCO052	May Day Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	CO	038
NSCO056	Abandoned Mine Land (AML) Training for the San Juan Field Office	ODELL	CO	038
AECO009	Gunnison Resource Area Office - Interior Design	TOLLEFSON	CO	036
NSES001	Oil and Gas Contamination of Water Wells	SAARELA	ES	030
NCFA037	Air Quality Liaison for Smoke Management Activities	DUNTON	FA	130
NSID045	Snake River Basin Adjudication Support (Continuation)	BRUNNER	ID	930
NSID046	Soil Quality Assistance for Rangeland Health Assessment Training Course	PELLANT	ID	931
NSMT030	Rock Creek Tributary Wildlife Reservoir in North Valley County	JENNINGS	MT	066
NSNM016	Chino Copper Mine EIS Air Resources Technical Assistance	CUSTER	NM	036
NSNM015	Continental Copper Mine EIS Air Resources Technical Assistance	JENTGEN	NM	037
NSNM023	Copper Flats EIS Air Resources Technical Assistance	JENTGEN	NM	037
NSNV073	Water Quality Support - Elko Field Office	CLUCK	NV	012
NSOR060	Cleveland Mine Site Cleanup: Flow Estimates for Channel Restoration	JACOBOSKI	OR	130
NCTC080	Ground Water Training Course FY 99	FECHNER	TC	
NCTC076	AML Site Characterization (1703-14) and Environmental Site Characterization Class (1703-3)	SYKES	TC	
NSUT037	Manning Canyon Tailings PRP Search and NRDAR Screening	CARPENTER	UT	020
NSUT041	Well Site Investigation (Cycle Springs Well)	HARDY	UT	020
GSUT058	Monitoring of the Bonneville Salt Flats Laydown Project	JOHNSON	UT	020
NSUT040	Technical Assistance - Emery County, UT, Soil Survey (Continuation)	MAXFIELD	UT	932
NSUT034	Ferron Natural Gas EIS Air Resources Technical Assistance (Continuation)	WAGNER	UT	932
GSUT054	GIS Assistance for Hydrologist at the Richfield, Utah, Field Office	ZIEG	UT	052
NSUT026	Ground Water Assessment of Gandy Marsh, West Desert, in Utah	ZIEG	UT	052
RAWO259	Bureauwide Air Quality Liaison	ARVISO	WO	220

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Project No.	Project Name	Client	State	Office
RAWO260	Bureauwide Climate Liaison	ARVISO	WO	220
RAWO261	BLM Representative to Interagency WESTAR Council	ARVISO	WO	220
NSWO072	Represent BLM on National Cooperative Soil Survey Technical Activities	BORCHARD	WO	220
RAWO265	Riparian Data	BORCHARD	WO	220
NSWO082	Technical Assistance Contract Administration	HYDE	WO	360
NSWO070	Federal Interagency Sedimentation Project	JANES	WO	220
NSWO084	DOI Environmental Conference Planning	MORRIS	WO	360
RAWO238	HBCU Liaison with Alabama A&M University	NUNN	WO	720
RAWO256	BLM Representative to the IMPROVE Steering Committee	RAMEY	WO	220
RAWO221	Climate and Weather Technical Reference	ROBERTS	WO	220
GSWO103	Abandoned Mine Lands Mapping	STONE	WO	360
NSWO022	Develop Rangeland Soil Guide	VOIGT	WO	220
NSWY027	BLM - EPA Air Quality Coordination	DANIELS	WY	930
GSWY008	Development of GIS Multivariate Analysis Methods to Automatically Classify Similar Terrain Units from Digital Elevation Models	HINRICHSEN	WY	950
NSWY025	Proposed Stock-Water Wells in Sublette County, Wyoming	HOWLAND	WY	046
NSWY015	South Baggs EIS Air Resources Technical Assistance	JACKSON	WY	037
NSWY014	Continental Divide/Wamsutter II EIS Air Resources Technical Assistance	MILLER	WY	037

Range Management (1020 and 6331)

Project No.	Project Name	Client	State	Office
ICCA004	Stop the Spread of Noxious Weeds Flyers	DEARING	CA	912
GSCO029	Colorado Interagency Vegetation Classification - FY 99	CAROCHI	CO	052
NSID046	Soil Quality Assistance for Rangeland Health Assessment Training Course	PELLANT	ID	931
RAWO211	BLM Lead for Service First Grazing Administration Effort	DELANEY	WO	220
RAWO217	Y2K Validation for GABS and RIPS	DELANEY	WO	220
GSWO104	Development and Support of Rangeland Spatial Application	GREEN	WO	210
RAWO167	SSST Weeds Data Base	HAMILTON	WO	220
RAWO209	Weed Research	HAMILTON	WO	220
ICWO071	Langston University Video	NUNN	WO	720
RAWO235	IDS/IDSU User Representative	RAMEY	WO	220
RAWO237	Investment Analysis Model (IAM) User Representative	RAMEY	WO	220
RAWO243	Rangeland Improvement Project System (RIPS) User Representative	RAMEY	WO	220
RAWO244	Grazing Authorization and Billing System (GABS) User Representative	RAMEY	WO	220

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Project No.	Project Name	Client	State	Office
RAWO254	Prepare Annual Rangeland Inventory, Monitoring, and Evaluation Report	RAMEY	WO	220
RAWO219	Revise Rangeland Monitoring Technical Reference 4400-7, Analysis, Interpretation, and Evaluation	ROBERTS	WO	220
RAWO220	Prepare Addendums to 1734-3 and 1734-4 and Reprint Both	ROBERTS	WO	220
RAWO242	Rangeland Health MOU Workgroup	ROBERTS	WO	220
GSWY008	Development of GIS Multivariate Analysis Methods to Automatically Classify Similar Terrain Units from Digital Elevation Models	HINRICHSEN	WY	950
GSWY026	Assist with Landcover Classification of Newcastle Resource Area	MEYER	WY	950

Forestry Management (1030 and 6310)

Project No.	Project Name	Client	State	Office
NSMT027	Forest Vegetation Information System (FORVIS) Beta Test - Montana	HENSLEY	MT	920
NSMT028	Montana Forest Vegetation Data Conversion and Load to the Forest Vegetation Information System (FORVIS)	HENSLEY	MT	920
GSMT029	Sunflower Mountain Landscape Analysis GIS Data Compilation	JEWELL	MT	926
NSNM031	FORVIS Beta Test - New Mexico	MILLER	NM	017
NSWO091	USFS Forest Inventory & Analysis National Meeting	STEWART	WO	230
RAWO241	Timber Sale Information System (TSIS)	STEWART	WO	230
RAWO183	FORVIS '98 - ARC VIEW Applications	TORGERSEN	WO	230
RAWO227	FORVIS Beta Test Prep	TORGERSEN	WO	230

Riparian Management (1040)

Project No.	Project Name	Client	State	Office
NSAK036	Stream Dynamics and Channel Design Workshop	STERIN	AK	930
GSCO029	Colorado Interagency Vegetation Classification - FY 99	CAROCHI	CO	052
NSID046	Soil Quality Assistance for Rangeland Health Assessment Training Course	PELLANT	ID	931
NSMT030	Rock Creek Tributary Wildlife Reservoir in North Valley County	JENNINGS	MT	066
NSOR054	Update and Provide Training for TR 1737-12 "Using Aerial Photographs to Assess PFC of Riparian-Wetland Areas"	ELMORE	OR	050
NSOR055	Technical Reference TR 1737-16 "Purpose of the Lentic Checklist Questions and Supporting Science for the PFC Technique"	ELMORE	OR	050

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Project No.	Project Name	Client	State	Office
NSOR056	Training and Field Assistance for BLM, FS, and NRCS Field Offices for the Applications of TR 1737-9, TR 1737-11, and TR 1737-15	ELMORE	OR	050
RAWO228	Represent BLM on the Federal Geographic Data Committee	BORCHARD	WO	220
RAWO265	Riparian Data	BORCHARD	WO	220
ICWY007	Booklet - "Assessing Lentic Wetland Health Using the Proper Functioning Condition Method"	DONCASTER	WY	040
GSWY008	Development of GIS Multivariate Analysis Methods to Automatically Classify Similar Terrain Units from Digital Elevation Models	HINRICHSEN	WY	950
GSWY026	Assist with Landcover Classification of Newcastle Resource Area	MEYER	WY	950

Cultural Resources Management (1050)

Project No.	Project Name	Client	State	Office
GSNM021	Fort Craig Topographic Site Map	BEWLEY	NM	952
GSWY033	Low Altitude High Resolution (LAHR) Photographing of Selected Areas in the Red Gulch Dinosaur Tracksite ACEC and the Big Cedar Ridge ACEC, BLM Worland Field Office	BAKER	WY	010
GSWY029	Red Gulch Wyoming Dinosaur Tracksite Topographic Base Map	BARNES	WY	010
GSWY030	Close Range Photography of Dinosaur (Sauropod) Skeleton near Shell, Wyoming	HARE	WY	020

Wild Horses and Burros (1060)

Project No.	Project Name	Client	State	Office
RANV009	Develop and Implement the WHB Compliance Module	POGACNIK	NV	960
RANV016	WH&B Compliance Sampling	POGACNIK	NV	960
RANV014	User Representative for HB System	POGACNIK	NV	960
RANV013	Enhance WH&B System	POGACNIK	NV	960
ICWO091	Wild Horse and Burro Handbooks	HAMPTON	WO	260
AEWY024	Electrical Work at the Rock Springs Horse Corral and the Fontenelle Campground	SCHRAMM	WY	040

Wildlife Management (1110)

Project No.	Project Name	Client	State	Office
GSAZ017	Arizona Strip Ortho-Photo Production	MOORE	AZ	010
NSWO090	BLM Mountain Sheep Working Group Support	HILLIARD	WO	230
NSWO074	BLM Wildlife Diseases Technical Assistance	HILLIARD	WO	230
RAWO215	Data Conversion to Informix/MS Access	JAUHOLA	WO	230
RAWO218	User Representative for SSST, IHICS, WORDS, RAIDS, PLS, HMP	JAUHOLA	WO	230
RAWO216	Expertise Directory	SILVEY	WO	230
NSWY028	Greater Yellowstone Interagency Brucellosis Committee (GYIBC) Participation and Support	DANIELS	WY	930

Fisheries Management (1120)

Project No.	Project Name	Client	State	Office
NSAK036	Stream Dynamics and Channel Design Workshop	STERIN	AK	930
NSCO064	Animas River Geophysical Review	ROBINSON	CO	933
NCFA038	NEPA and Fire Management Planning Presentation at the Fire and Resources Workshop (Implementing the Federal Wildland Fire Policy Workshop)	MILLER	FA	130
NSMT030	Rock Creek Tributary Wildlife Reservoir in North Valley County	JENNINGS	MT	066
ICWY007	Booklet - "Assessing Lentic Wetland Health Using the Proper Functioning Condition Method"	DONCASTER	WY	040

Threatened and Endangered Species (1150)

Project No.	Project Name	Client	State	Office
GSAZ020	Mexico-US T&E Pupfish Project	WILSON	AZ	953

Wilderness Management (1210)

Project No.	Project Name	Client	State	Office
GSUT051	Utah Wilderness Inventory Review Report	JARVIS	WO	240
GSWO092	Wilderness Data	PORTER	WO	240

Recreation Resources Management (1220 and 6332)

Project No.	Project Name	Client	State	Office
GSAZ018	Empire-Cienega Route Inventory	FORTUN	AZ	060
GSAZ015	Lake Pleasant Road Updates of Designated Areas	GIBSON	AZ	020
GSAZ022	Garfias Mountain Road Updates	GIBSON	AZ	020
GSAZ026	Arizona Route Inventories - Estimates for Photogrammatic Collection of Routes	GIBSON	AZ	020
GSAZ023	Arizona Strip - Visitor Map	MOORE	AZ	010
AEAZ013	Virgin River Campground Water System Improvements	STONE	AZ	010
ICWO092	BLM Interpretive Strategy Plan	GALPERIN	CO	931
GSID032	Updating the Boaters Guide for the South Fork of the Snake River - Southeastern Idaho	RICE	ID	035
AEID014	Conceptual Site Plan for Dike Recreation Area	STEVENS	ID	956
AEID016	Design for Construction of Blackwell Island Recreation Site	STEVENS	ID	956
GSNM021	Fort Craig Topographic Site Map	BEWLEY	NM	952
AENM003	Taos Scenic River Conceptual Plan for River Access County Line Site Along Rio Grande River	SUNDIN	NM	018
AENV034	Indian Creek Restroom Accessibility Revisions	EKSTAND	NV	930
NSOR059	Lookout Mtn VRM Scoping Study	KELLERMAN	OR	035
GSUT055	Scoping of the San Rafael Swell Route Inventory Proposal	GRAY	UT	941
GSUT033	Analysis of Classified NTM Data for the Grand Staircase-Escalante National Monument (EIAP Study)	MEREDITH	UT	030
GSUT056	Ken's Lake Recreation Site - Photogrammetric Compilation	SWEETEN	UT	060
AEWO067	ISTEA Lead	BISSON	WO	200
GSWO072	A GPS Controlled Large Scale Remote Control Aerial Photography	BUHLER	WO	350
AEWO077	Accessibility	ELLIS	WO	250
GSWO076	Show-Tell on West Mojave Project at National Trails Symposium	PETERSON	WO	250
AEWO076	Recreation Management Information System (RMIS) Lead	RAWHOUSER	WO	250
RAWO205	VRM Program Coordination/Services	SCHMITT	WO	250
RAWO232	FS/BLM Technology & Development Recreation Projects	SCHMITT	WO	250
RAWO236	VRM Training Coordination	SCHMITT	WO	250
ICWO089	National Public Lands Day 1999	TISDALE	WO	650
GSWY033	Low Altitude High Resolution (LAHR) Photographing of Selected Areas in the Red Gulch Dinosaur Tracksite ACEC and the Big Cedar Ridge ACEC, BLM Worland Field Office	BAKER	WY	010
GSWY029	Red Gulch Wyoming Dinosaur Tracksite Topographic Base Map	BARNES	WY	010

Oil and Gas (1310)

Project No.	Project Name	Client	State	Office
ICCO012	Environmental Education for Schools	MALINOWSKI	CO	930
NSCO044	Glenwood Springs Natural Gas Environmental Impact Statement (EIS)	MOORE	CO	078
NSCO047	Oversite of the Content of the Air Quality Section of the Southern Ute Tribe Oil and Gas EIS (Continuation)	RHETT	CO	931
NSES001	Oil and Gas Contamination of Water Wells	SAARELA	ES	030
NSUT042	River Gas Environmental Review (Coalbed Methane)	FLOOD	UT	066
NSUT034	Ferron Natural Gas EIS Air Resources Technical Assistance (Continuation)	WAGNER	UT	932
RAWO229	MMS/BLM Liaison and Data Transfer/Special Projects	BARNETT	WO	310
RAWO230	MMS/BLM Outreach	BARNETT	WO	310
RAWO212	Fluid Minerals Support for Automated Systems	BROWN	WO	310
RAWO252	Automated Fluid Minerals Support System (AFMSS)	BROWN	WO	310
RAWO231	Federal Technical Subcommittee Support	KAARLEIA	WO	310
NSWY015	South Baggs EIS Air Resources Technical Assistance	JACKSON	WY	037
NSWY014	Continental Divide/Wamsutter II EIS Air Resources Technical Assistance	MILLER	WY	037

Other Mineral Resources (1330)

Project No.	Project Name	Client	State	Office
AEAZ011	ASARCO Tailings Dam Seismic Review	HOM	AZ	910
GSCO025	Acquisition of Aerial Photography of Prospect Gulch	PETERSON	CO	070
NSNM016	Chino Copper Mine EIS Air Resources Technical Assistance	CUSTER	NM	036
NSNM015	Continental Copper Mine EIS Air Resources Technical Assistance	JENTGEN	NM	037
NSNM023	Copper Flats EIS Air Resources Technical Assistance	JENTGEN	NM	037
GSNV013	Dry Lake Range, Nevada, Subsurface Limestone Deposit Geologic Model	CHATTERTON	NV	053
NSNV076	Mason Valley Geophysical, Yerington	JAMES	NV	030
RAWO223	National Abandoned Mine Lands Home Page/Web Site	STONE	WO	360
RAWO225	Abandoned Mine Lands	STONE	WO	360
RAWO246	AML Safety Brochure	STONE	WO	360

Cadastral Survey (1420)

Project No.	Project Name	Client	State	Office
GSCO026	Geodesy/GPS Technical Support	NAGY	CO	956
GSID033	Riparian Boundary Investigation - Snake River/ American Falls - Phase 2	SMIROV	ID	957
GSNM022	Pueblo of Isleta DOJ/NMSO Support	BENNETT	NM	952
GSNM024	Geodesy/GPS Technical Support for NM (FY99)	INNES	NM	952
ICWO081	Exhibit and Brochure for Cadastral Survey	ADER	WO	350
GSWO069	Geodesy/GPS Support of WO Cadastral Survey	BUHLER	WO	350
GSWO072	A GPS Controlled Large Scale Remote Control Aerial Photography	BUHLER	WO	350
GSWO093	APD Production Training	BUHLER	WO	350
ICWO075	Cadastral Survey Notes and Plats	BUHLER	WO	350
ICWO076	Update Cadastral Survey Notes and Plats	BUHLER	WO	350
ICWO077	Storage of Microfilm Masters	BUHLER	WO	350
ICWO078	Microfilm Services	BUHLER	WO	350
ICWO087	Micrographics Transition Plan	BUHLER	WO	350

Land and Realty Management (1430)

Project No.	Project Name	Client	State	Office
NSAZ043	Travasci Marsh Contaminants Review	CHENIAE	AZ	917
NSCA054	Molycorp Cleanup Financial Tracking System and Expenditure Report	BRADY	CA	069
NSCO068	Waterpower and Reservoir Resources (WRR) Operational Assistance - Power Site Reserve (PSR) 92 - Arkansas River	CHELIUS	CO	935
NSCO043	Anvil Points Oil Shale Site Environmental Assessment	LANCE	CO	932
GSID035	Idaho Communication Sites Topographic Maps	CRAIG	ID	957
NSNM033	Broom Assessment	LACEWELL	NM	060
GSNV010	Elko, Nevada, Aerial Photo Acquisition (NV98AI)	MARCHIO	NV	010
NSUT038	Utah Land Exchange Environmental Site Assessments	CATLIN	UT	930
NSUT039	Waterpower Assessment of Power Site Reserve 34	MASSEY	UT	045
GSUT033	Analysis of Classified NTM Data for the Grand Staircase-Escalante National Monument (EIAP Study)	MEREDITH	UT	030
RAWO222	Military Lands: Closures, Transfers, UXO	DUDLEY	WO	360
GSWO082	Interagency Geographic Sciences Coordination	HARNE	WO	210
RAWO208	BLM Waterpower and Reservoir Resources Lead (Waterpower Assessment of Power Site Classification 93 in Utah)	HOLDREN	WO	350
RAWO253	NARSC Lead for Federal Energy Regulation Commission Relicensing Efforts	HOLDREN	WO	350

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Project No.	Project Name	Client	State	Office
ICWO069	Public Rewards from Public Lands 1998	HUNT	WO	610
ICWO082	Women and Homesteading Article	JUNIUS	WO	610
GSWO101	GIS Recommendations for Langston University	NUNN	WO	720

Resource Management Planning (1610)

Project No.	Project Name	Client	State	Office
GSAZ018	Empire-Cienega Route Inventory	FORTUN	AZ	060
GSAZ015	Lake Pleasant Road Updates of Designated Areas	GIBSON	AZ	020
GSAZ022	Garfias Mountain Road Updates	GIBSON	AZ	020
GSAZ026	Arizona Route Inventories - Estimates for Photogrammatic Collection of Routes	GIBSON	AZ	020
ICCO012	Environmental Education for Schools	MALINOWSKI	CO	930
GSID035	Idaho Communication Sites Topographic Maps	CRAIG	ID	957
GSUT049	San Rafael Swell Resource Aerial Photography (UT98BC)	CASPER	UT	941
GSUT057	Scanning Geologic Data for Eight 100K Maps in Utah	CASPER	UT	941
GSUT055	Scoping of the San Rafael Swell Route Inventory Proposal	GRAY	UT	941
GSUT058	Monitoring of the Bonneville Salt Flats Laydown Project	JOHNSON	UT	020
GSUT060	Aerial Photo Interpretation Training Course	JOHNSON	UT	020
ICUT005	Edit, Design, and Layout the St. George Field Office Record of Decision and Resource Management Plan Document and Prepare it for Printing	MERMEJO	UT	045
NSUT043	Mapping the Location of Utah's Low-Income and Minority Populations	WILLIAMS	UT	934
GSWO097	Support Communications within Geographic Sciences throughout BLM	HARNE	WO	210
GSWO100	Develop Socioeconomic Coverage for GIS	STONE	WO	210
RAWO213	National Interagency Technical Team (NITT) on Ecological Units Mapping	STONE	WO	210
GSWO074	Community-Based Planning Assistance	TAYLOR	WO	210

Facilities Maintenance (1620 and 6210)

Project No.	Project Name	Client	State	Office
AEAK014	Mayflower Island Utility System Plans and Specifications	BAER	AK	933
NSAK033	CASHE Visit - Northern Field Office	FLORA	AK	020
GSAZ021	Lake Havasu Site Maps for Deferred Maintenance	DEBOCK	AZ	050
NSAZ034	CASHE Visit - Arizona Strip Field Office	SMITH	AZ	010

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—Appendix 1—Program Support—

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Project No.	Project Name	Client	State	Office
AEAZ013	Virgin River Campground Water System Improvements	STONE	AZ	010
NSCA055	CASHE Visit - Bakersfield District	FORESTER	CA	931
AECA012	Salt Wells Fire Facility	GRAHAM	CA	060
AECO010	Anasazi Heritage Center Deferred Maintenance Condition Assessment	COX	CO	952
AECO011	BLM / USFS Public Lands Center - Interior Design	JOYNER	CO	038
AECO009	Gunnison Resource Area Office - Interior Design	TOLLEFSON	CO	036
AEES001	Milwaukee District Office Space Reduction	DRYDEN	ES	990
AEES002	ESO Space Analysis and Reduction	FOX	ES	
NCFA035	New Sanitary Facilities for NIFC Building 410-A	NELSON	FA	280
NCFA031	CASHE Assessment - NIFC	PALMER	FA	203
NCDC046	Diversity Project	DUKES	HR	210
AEID014	Conceptual Site Plan for Dike Recreation Area	STEVENS	ID	956
AEID016	Design for Construction of Blackwell Island Recreation Site	STEVENS	ID	956
AEID019	China Creek Bridge Design	STEVENS	ID	956
AEID023	Revise Standard Fire Station Drawings and Provide Structural Plans and Specifications for Constructing the Soda Springs Fire Station	STEVENS	ID	956
AEID024	Deferred Maintenance Condition Assessments at Boise, Burley, and Cottonwood Sites	STEVENS	ID	956
AEMT013	Billings Air Tanker Base Building Design Review	BERGUM	MT	931
AEMT015	Miles City Fire Operations Office Building - Interior Office Space Drawings and Specifications	BERGUM	MT	931
NSMT025	CASHE Visit - Lewistown District	HIGHT	MT	020
NCDC044	Design for Building 40 Entrance Doors	BYERS	NI	133
AENM003	Taos Scenic River Conceptual Plan for River Access County Line Site Along Rio Grande River	SUNDIN	NM	018
NSNV058	CASHE Visit - Battle Mountain and Winnemucca Districts	SKINNER	NV	920
AENV031	Pony Springs Fire Station Inspection	WILKIN	NV	040
NSOR046	CASHE Visit - Burns District	MURPHY	OR	932
NSOR047	CASHE Visit - Roseburg District	MURPHY	OR	932
NSUT033	CASHE Assessment - Salt Lake City District Office	BROWN	UT	020
AEUT017	Department of the Interior Conference on the Environment - Poster Session	DUNCAN	UT	941
AEWO059	User Rep and Tech Support for FIMMS	FORCE	WO	360
AEWO064	FIMMS Backlog Data Collection	FORCE	WO	360
AEWO065	Dam Safety Lead	FORCE	WO	360
AEWO066	Value Engineering Lead	FORCE	WO	360
AEWO068	Sustainability Program/Work Group	FORCE	WO	360

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Project No.	Project Name	Client	State	Office
AEWO069	National Lead for Energy Conservation	FORCE	WO	360
AEWO070	BLM Metric Program	FORCE	WO	360
AEWO071	Bridge Safety BLM Lead	FORCE	WO	360
AEWO072	Engineering Advisory Team	FORCE	WO	360
AEWO073	Denver Club Fed	FORCE	WO	360
AEWO078	Guide Specifications for Construction Support	FORCE	WO	360
AEWO079	Upgrade FIMMS Data	FORCE	WO	360
AEWO080	Seismic Safety in BLM Buildings	FORCE	WO	360
AEWO081	FIMMS Support	FORCE	WO	360
AEWO075	Coordinate Data Standards for FIMMS and GIS with WO and Other Centers	GRIFFITH	WO	360
NSWO094	BLM/EPA Transient Non-Community Drinking Water Training Course	HYDE	WO	360
AEWO082	Support to the Industrial Advisory Council at Florida A&M University	SHAFRAN	WO	107
AEWY022	Kemmerer Resource Area Office Restructure	RAWSON	WY	047
AEWY027	Mechanical and Electrical Engineering Support for the Rawlins Warehouse Addition	ROSEBERRY	WY	030
AEWY024	Electrical Work at the Rock Springs Horse Corral and the Fontenelle Campground	SCHRAMM	WY	040
AEWY025	Rock Springs District Office Repair	SCHRAMM	WY	040
AEWY026	Rock Springs District Office Warehouse Reroofing	SCHRAMM	WY	040
AEWY028	Bar C and Pathfinder Bridge Inspections	SKILLMAN	WY	060

Hazardous Materials Management (1640)

Project No.	Project Name	Client	State	Office
NSAK039	Red Top Mine Potentially Responsible Party (PRP) Case - FY 99 Phase	ALLEN	AK	910
NSAK035	North Alaska HAZMAT Site GPS/GIS Mapping	FLORA	AK	020
NSAZ043	Travasci Marsh Contaminants Review	CHENIAE	AZ	917
NSAZ041	Golden Green Placer Sampling Assistance	TALBOT	AZ	930
NSCA054	Molycorp Cleanup Financial Tracking System and Expenditure Report	BRADY	CA	069
NSCA019	Iron Mountain Mine Natural Resource Damage Assessment	FORESTER	CA	931
NSCO040	Henrietta Mine Potentially Responsible Party (PRP) Case	ODELL	CO	038
NSCO049	Forest Queen Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	CO	038
NSCO050	Joe and John Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	CO	038
NSCO051	Lark Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	CO	038

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Project No.	Project Name	Client	State	Office
NSCO052	May Day Abandoned Mine Land (AML) Site Potentially Responsible Party (PRP) Case	ODELL	CO	038
NSCO057	Bendora Mine Potentially Responsible Party (PRP) Search	ODELL	CO	038
NSCO058	Brooklyn Mine Potentially Responsible Party (PRP) Search	ODELL	CO	038
NSCO060	Bonner Mine Potentially Responsible Party (PRP) Search	ODELL	CO	038
NSCO064	Animas River Geophysical Review	ROBINSON	CO	933
NSID035	Risk Assessment for Black Pine Mine	SHILLING	ID	020
NSMT024	Litigation Support - Whitewood Creek NRDAR	BIERBACH	MT	923
NSNM033	Broom Assessment	LACEWELL	NM	060
NSNM020	Tar Creek Evaluation Phase II (CERCLA)	SINCLAIR	NM	931
NSNV078	Sunrise Landfill Administrative Record File	SKINNER	NV	920
NSNV072	Sunrise Landfill Technical Assistance and Review of Ground Water Monitoring Plan	MORAN	NV	050
NSOR060	Cleveland Mine Site Cleanup: Flow Estimates for Channel Restoration	JACOBOSKI	OR	130
NSOR052	Middle Creek Battery Site Removal Preliminary Assessment	VOTAW	OR	120
NCTC076	AML Site Characterization (1703-14) and Environmental Site Characterization Class (1703-3)	SYKES	TC	
NCTC077	Instruct at NTC Course 1703-9	SYKES	TC	
NCTC078	HAZMAT Management Training Revision and Planning	SYKES	TC	
NSUT037	Manning Canyon Tailings PRP Search and NRDAR Screening	CARPENTER	UT	020
NSUT038	Utah Land Exchange Environmental Site Assessments	CATLIN	UT	930
NSWO096	Conversion of BLM Proposed HAZMAT Site Relative Risk Model from dBase to Access	DEAN	WO	360
RAWO210	Cost Recovery/Cost Avoidance Program Administration and Policy Development	DUDLEY	WO	360
NSWO063	New Technical Assistance Contract Administration	HYDE	WO	360
NSWO082	Technical Assistance Contract Administration	HYDE	WO	360
NSWO084	DOI Environmental Conference Planning	MORRIS	WO	360
GSWO103	Abandoned Mine Lands Mapping	STONE	WO	360
NSWO093	BLM HAZMAT Information System, Report of Activities from 1990 to Present	STONE	WO	360
RAWO263	Draft Guidance Document for the NCP Removal Process	STONE	WO	360

Information Systems Operations (1810)

Project No.	Project Name	Client	State	Office
GSWO078	Support IRMAC Internet Technical Team	NEDD	WO	500
ICWO079	Environmental Education & Volunteers Cataloging/Circulation Project	BOOTH	WO	650

— Appendix 1—Program Support —

Administrative Support (1820)

Project No.	Project Name	Client	State	Office
NCDC047	Master Card Update Newsletter	MARTIN	BC	600
RAMT001	Establishing a Tribal Colleges Clearinghouse for the Northern Great Plains	HAMILTON	MT	910
RANM009	Develop Five Year Strategy Plan for EO 13021	GARCIA-BURKE	NM	910
RANM010	Liaison with Haskell Indian Nations University (HINU)	GARCIA-BURKE	NM	910
RANM013	Liaison with AISES	GARCIA-BURKE	NM	910
RANM015	Cooperative Agreement between BLM and Crown Point Institute of Technology (CIT)	GARCIA-BURKE	NM	910
RANM019	Spirit Lake Natural Resources Workshop	GARCIA-BURKE	NM	910
ICNM002	Edit State Functional Statement	SPLENDORIA	NM	950
ICWO086	Making a Difference, BLM's 1997 Volunteer Annual Report	BOOTH	WO	650
ICWO074	BLM Annual Report - 1998	HATFIELD	WO	800
RAWO207	USGS Science Center Evaluation	HAUGH	WO	210
ICWO084	FY 98 Customer Satisfaction Report	KEITH	WO	830
ICWO090	Vice President Gore's Catalysts for Change Brochure	SCHWAGER	WO	650
ICWO088	SCEP Training Document	SHAFRAN	WO	107
ICWO094	Making a Difference - BLM's 1998 Volunteer Annual Report	TISDALE	WO	650

Fire Use and Management (2810)

Project No.	Project Name	Client	State	Office
ICCO011	Fire Prevention and Education Needs Analysis for BLM Colorado	ALFORD	CO	957
NCFA038	NEPA and Fire Management Planning Presentation at the Fire and Resources Workshop (Implementing the Federal Wildland Fire Policy Workshop)	MILLER	FA	130
AEID023	Revise Standard Fire Station Drawings and Provide Structural Plans and Specifications for Constructing the Soda Springs Fire Station	STEVENS	ID	956
AEMT015	Miles City Fire Operations Office Building - Interior Office Space Drawings and Specifications	BERGUM	MT	931
AEMT013	Billings Air Tanker Base Building Design Review	BERGUM	MT	931
AENV031	Pony Springs Fire Station Inspection	WILKIN	NV	040

Natural Resource Damage Assessment and Restoration (9210)

Project No.	Project Name	Client	State	Office
NSCA019	Iron Mountain Mine Natural Resource Damage Assessment	FORESTER	CA	931
NSMT017	Natural Resource Damage Assessment (NRDA) Support for Whitewood Creek and Downstream Waters - South Dakota	BIERBACH	MT	923
NSMT024	Litigation Support - Whitewood Creek NRDAR	BIERBACH	MT	923
NSWO080	DOI NRDA Policy Work Group	HYDE	WO	360
NSWO085	Program Coordination, Project Support for NRDA	HYDE	WO	360
NSWO086	NRDA DOI Project Fund Allocation Group	HYDE	WO	360
NSWO083	Continue Contract Administration and Related Work for NRDA Screenings	KNIGHT	WO	360

ISTEA (9420)

Project No.	Project Name	Client	State	Office
AEWO067	ISTEA Lead	BISSON	WO	200

Appendix 2—Directory

Office of the Director (RS-100)

NARSC Director	Lee Barkow	(303) 236-6454
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